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Volume 8 Number 5
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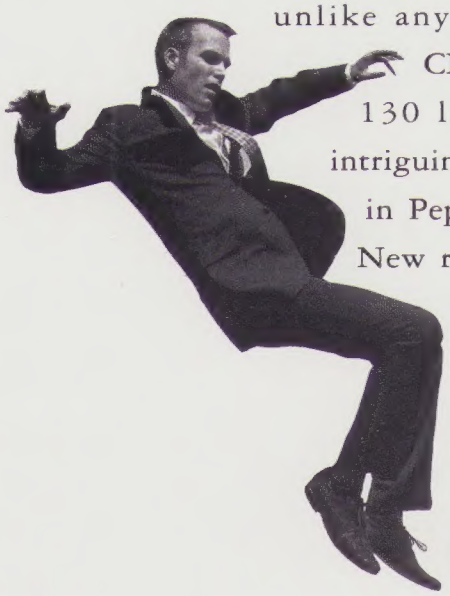

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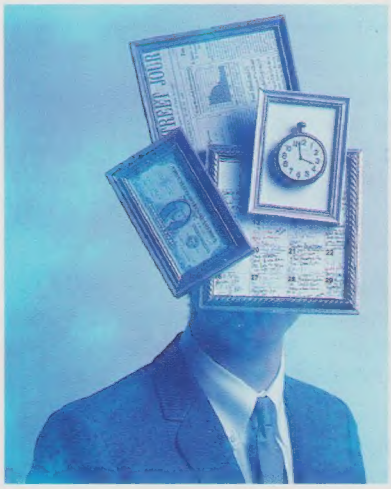

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On Our Cover Starting with a conventional black-and-white publicity photo, illustrator Mark Jasin edited a photo scan in Photoshop, then imported it as a TIFF into FreeHand to create this dynamic image of performer Ray Charles. In this issue he applies similar techniques to an electronic portrait of talk show host Oprah Winfrey (see page 52).

page 40

page 60

FEATURES

Airbrush and Line Illustration

40 Masterful Line for a Children's Video
Illustrator David Johnson creates 230 ink and airbrush illustrations, each full of energy and emotion, for a children's video animation. (By Susan E. Davis.)

Cover Story

52 Painting Digital Portraits
Learn how illustrator Mark Jasin energizes his photo manipulation work with color and movement using FreeHand, TextureSynth and Photoshop. (By Janet Ashford.)

Illustration for the Road

60 Mobile Art on a Grand Scale
See how a designer/illustrator team illustrates an entire city bus with a musical theme, complete with reflective graphics for nighttime impact. (By M. William Lutholtz.)

Painting with Acrylics

66 The Allure of Raw Canvas
Illustrator Dahl Taylor creates an evocative painting on raw canvas, demonstrating his unique "unfinished" style in a commemorative commission. (By Rebecca T. Godwin.)

Transparent Design

74 Livinglass: Designing the Light Fantastic
How one design firm combined calligraphy, typography, color and light to create a 120-foot donor recognition glass wall for an urban hospital. (By Todd Schwartz.)

Special Printed Inserts

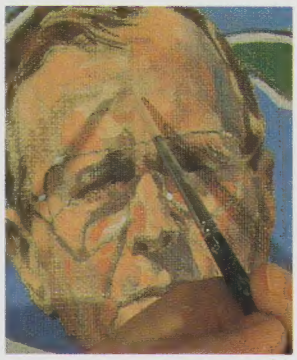
86 Monochrome Magic on Uncoated Paper
Photographer John Casado and The Stinehour Press show how to create powerful duo- and tritone images; see the results for yourself.

On-The-Job Training

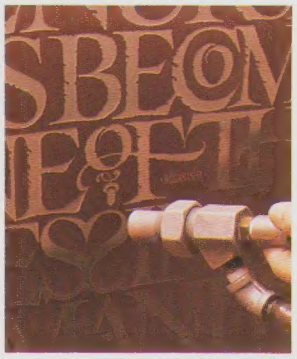
103 Real World Arts Education
For Alan Cober's advanced illustration students, it's an education they'll never forget: Professional art directors assign them real jobs with very real deadlines. (By Elizabeth Licata.)

Photoshop Illustration

110 Specialty CD Packaging
Designer Margo Chase creates a Grammy-nominated CD package, complete with "tarot cards," for pop superstar Cher. (By Greg Hofmann.)

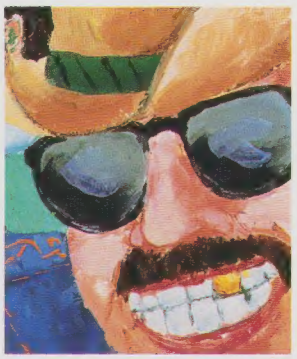


page 66



page 74

page 86



page 103

page 110

COLUMNS

28 Legal Side
"Signage and the Disabilities Act" – What every designer should know about the new Americans with Disabilities Act, and how the new law affects signage design and implementation. (By Marianne Goldsmith.)

122 ABCs of Type
"Trajanus: What's New in Oldstyles" – Designers seem to gravitate to oldstyle typefaces. This face might not be the most magnetic at first glance, but it has a powerful presence all its own. (By Allan Haley.)

128 Freelancing
"The Best and Worst Types of Assignments" – In Part II of this two-part article, learn which kinds of assignments pay the best, last the longest, pop up the most and aggravate the least. (By Cameron S. Foote.)

132 Methods of the Masters
"Mead Schaeffer: The Romance of the Brush" – Learn how one of the foremost illustrators of the American romantic period evoked moods and eras with his strong brushwork. (By Frederic B. Taraba.)

146 PressTalk
"Outputting Fine Color From the Desktop" – In the tradition of fine arts printers, a handful of color houses are producing limited edition Iris prints from digital files, pioneering a new printmaking method. (By Joe Matazzoni.)

DEPARTMENTS

Editor's Note 6
Letters 16
Career Tips 26
Zoning Problems, Training
Shortcuts 141
Reference Shelf 142
Plus Paper Resources
Calendar 145
Upcoming Events
Featured in this Issue 151
Where to Find Artists/Firms
Advertiser's Index 154
Looking Ahead 154
Upcoming Editorial Highlights

Production Notes This issue was produced using PageMaker 4.2 on a Mac IIci, Mac IIcx and a Mac II. Text was imported from Word and set in ITC Modern No. 216 and ITC Century (The Font Company), and Futura and Helvetica (Adobe). Some visuals were placed in position and separated electronically; the rest were separated and stripped in conventionally. The cover was composed electronically in FreeHand. Film was output on an L330 at 150 lpi at Pendell Printing, Midland, Mich. (U.S.A.), where the magazine was printed, using soy-based process color inks.

page 28

page 128

page 132

page 146

Step-By-Step Graphics (ISSN 0886-7682/USPS 755-270) is published six times a year (January/February, March/April, May/June, July/August, September/October, November/December) by Step-By-Step Publishing, a division of Dynamic Graphics, Inc., 6000 N. Forest Park Drive, Peoria, IL 61614-3592, for $42.00 per year in the U.S. and $51.00 per year outside the U.S.; single copies are $7.50 each. Group subscription rates upon request. September/October 1992, Vol. 8, No. 5. Canadian GST Account No. 125145193. POSTMASTER: Send change of address forms to *Step-By-Step Graphics*, 6000 N. Forest Park Drive, Peoria, IL 61614-3592. Second-class postage rates paid at Peoria, Ill., and at additional mailing offices.

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Published by Step-By-Step Publishing, a division of Dynamic Graphics, Inc., 6000 North Forest Park Dr., Peoria, IL 61614-3592; 309-688-2300; Fax 309-698-0831. For reprints (minimum order of 100 required), contact Emily Schrubbe at 309-688-2300.

EDITOR'S NOTE

As readers of this column will know, the warm and gracious man who has been at the editor's desk, John Fennell, has moved on to another publication. Your new editor has been writing features for *Step-By-Step Graphics* for the past two years, previously edited another how-to magazine for creative people, and is presently scrambling to learn the ropes on this one.

My first order of business is to get to know you, the readers, the better to meet your needs. I've been studying a recent reader survey (conducted by the independent research firm, Charles Hakes & Co.), and I thought you might be interested to learn what I've found out so far about you and your peers. What follows are a few highlights—the actual survey results run to some 50 pages.

While 60 percent of you call yourselves "graphic designers," most of you wear more than one hat: 49 percent are art directors, 43 percent are illustrators, 39 percent are graphic artists, 38 percent are creative directors. And 63 percent of you have *at least* a bachelor's degree, which tells me we had better watch our Ps and Qs.

Because so many of you are now spending long hours in digital space, we queried you extensively regarding your hardware and software preferences. Of the 86 percent of our readers who use a computer at work, 71 percent always use a Mac and 20 percent always use a PC. (Yes, Amiga users were tallied, too: 1.04 percent.) We suspect that cross-platform issues will become ever more important as Apple, Big Blue and the other hardware and software companies develop common protocols for sharing files and common command sets for cross-platform programs. This in turn may help us at *Step-By-Step Graphics* deal with the vexing problem of editorial balance regarding support of the various platforms.

On the software side, of those who use one or more page layout/word processing programs, 62 percent use PageMaker, 51 percent use MS Word, and 46 percent use QuarkXPress. Of those who use one or more PostScript drawing programs, 58 percent use Illustrator, 53 percent use FreeHand, 24 percent use Streamline, and 18 percent use Corel Draw. Among those who use paint/image manipulation software, Photoshop was the clear leader with 46 percent, followed by SuperPaint at 16 percent, MacPaint at 12 percent and Digital Darkroom at 11 percent. Among type creation and manipulation programs, the favorites were TypeStyler at 23 percent and Fontographer at 8 percent. Finally, for presentations, Persuasion was the favorite at 20 percent, followed by HyperCard at 15 percent. If you have been wondering which applications are the "standards" you should master, the above numbers may be helpful.

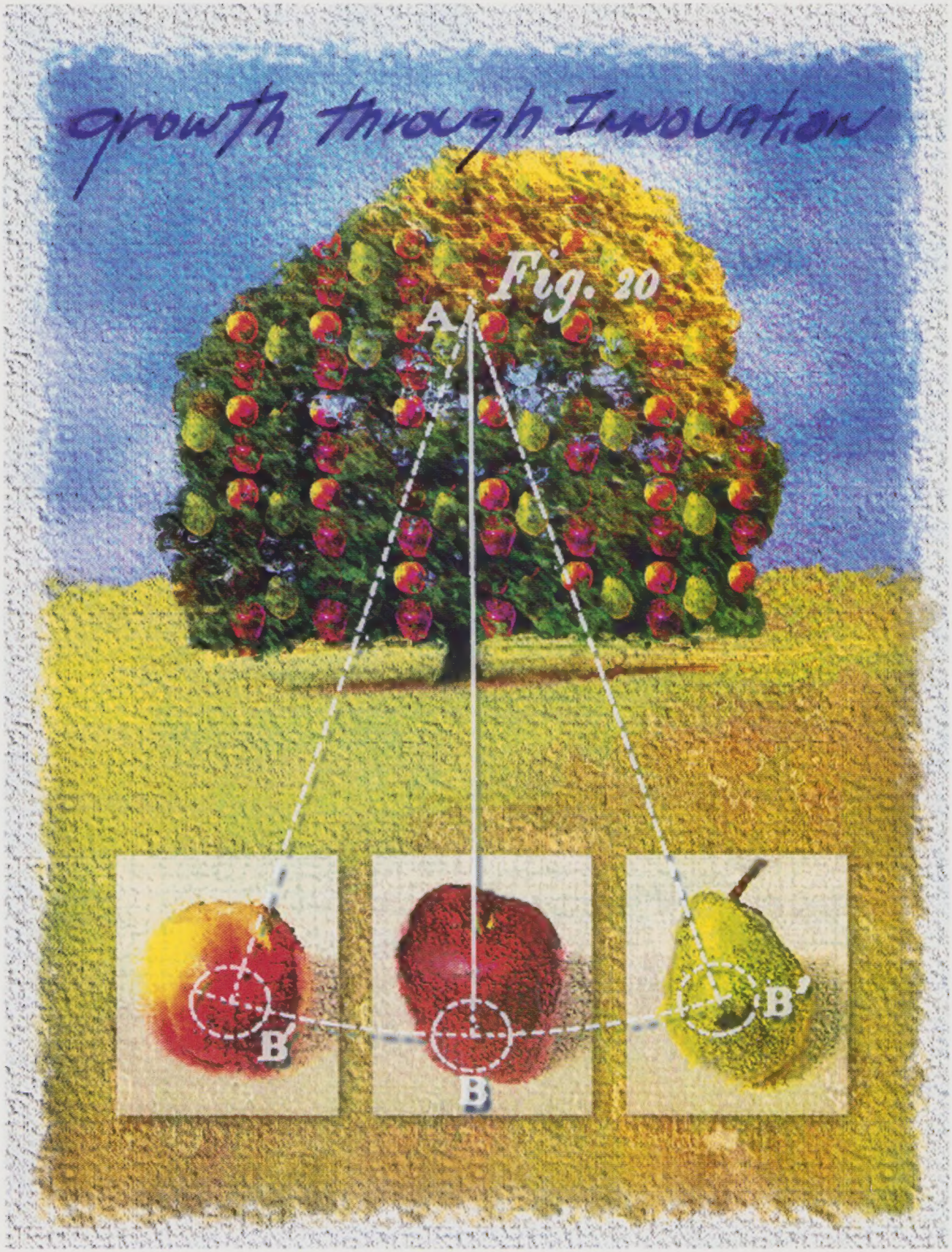
The most pointed information, editorially speaking, was your rating of our subject areas: Graphic design was first in importance, computer graphics was second, illustration third, prepress fourth, publication design fifth, and TV/AV/film sixth. This tells me that, while there is a healthy appetite for computer-related information, you continue to thirst for straight-ahead design, illustration and production stories as well. In fact, 61 percent of you said you like our current mix of articles, while 24 percent wanted more on electronic techniques (I would refer any insatiable cybernauts to our award-winning *Step-By-Step Electronic Design* newsletter), and 14 percent wanted more on traditional techniques. This tells me that we've been doing it about right, which is not to say we couldn't be doing it even better.

Which brings it all back to you. Our greatest interest right now is getting a sense of the people behind all the numbers. If you have ideas for features, techniques you'd like us to explore, people you'd like to see profiled, send us a letter at 6000 N. Forest Park Drive, Peoria, IL 61614-3592, or fax us at 309-698-0831. Tell us what the editorial survey missed, what is not in *Step-By-Step Graphics* that should be, what you wish we'd change and hope we don't.

We want to make *Step-By-Step Graphics* an indispensable tool for you. The best person to tell us how to do that is you.

—Greg Hofmann

CORRECTION Last issue, we used the wrong original art (an un-color-corrected test print from a Kodak XL 7700) for the feature on Dan Marcolina's electronic illustration techniques ("Painterly Effects From Video Grabs," Vol. 8, No. 4) by Joe Matazzoni. On the opposite page is the art as it should have appeared. Please help us assuage our guilt by cutting the facing page from this issue and inserting it opposite page 46 in the last issue. Our sincere apologies to artist Marcolina and writer Matazzoni.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Problems and Solutions: Visual Thinking for the Graphic Communicator, with **Richard Wilde,** Chairman, Graphic Design and Advertising Departments, School of Visual Arts.

Finer Type: Setting Professional Quality Type on the Desktop, with **Kathleen Tinkel,** designer, author and publisher of *MacPrepress.*

Straddling Two Worlds: Corporate Identity and Film, Saul Bass, filmmaker and designer, Saul Bass/Herb Yager & Associates.

Getting Information into Information Graphics, with **Nigel Holmes,** Graphics Director, *Time* magazine.

From Concept to Digital Finish: The Steps They Take, with **Lance Hidy,** and **Rob Day,** Lance Hidy Associates.

How Culture Affects Design, with **Jose Luis Ortiz,** department head, SVA, and **Felix Beltran,** Cuban designer and educator.

Changing the Face of Annual Reports, with **Mark Schwartz,** Nesnadny & Schwartz, and **Michael Weymouth,** Weymouth Design.

Creative Energy: How to Light the Fire and Keep It Alive, with **Ian Summers,** Ian Summers' Creativity Workshops.

Success Strategies for the Creative Professional, with **Maria Piscopo,** educator, artists representative and author.

The 'New' Business of Graphic Design, with **Ed Gold,** author of The Business of Graphic Design, **Ellen Shapiro,** Shapiro Design Associates, and **John Waters,** Waters Design Associates.

Electronic Design & Illustration I and II, with **Bert Monroy,** author of The Official Adobe Photoshop Handbook, and **Rick Barry,** DeskTop Design Studio.

Desktop Studio Techniques: Design, Illustration and Type Tips, with **Luanne Cohen,** author of Design Essentials a new how-to book on computer tips and techniques using Adobe Photoshop and Illustrator.

Design For the Future: The Practice of Environmental Responsibility, with **Claudia Thompson,** designer and author of Recycled Papers: The Essential Guide.

Tips, Tricks and Traps in Color Printing Production, with **Daniel Dejan,** Dejan Associates, and **Kurt Klein,** Graphic Arts Center.

Designing for Interactive and Multimedia, with multidisciplinary designer **Clement Mok,** CMd, Inc.

Desktop Animation for Fun—and Profit, with **Lynda Weinman,** computer animation educator and principal of Lynda Weinman Animation.

Mining Visual Ideas: From Research, Association, Coincidence, with designer/illustrator **John Sposato.**

Rights and Wrongs in a Digitized World, with **Tad Crawford,** attorney and president, Allworth Press, and **Liane Sebastian,** designer and president, ADEPT.

Color on the Desktop: Making it Really Work, with **Bob Schaffel,** author, educator, president Professional PrePress Alliance and manager of Sprintout.

See page 22 for more information on GRAFIX 92 or call
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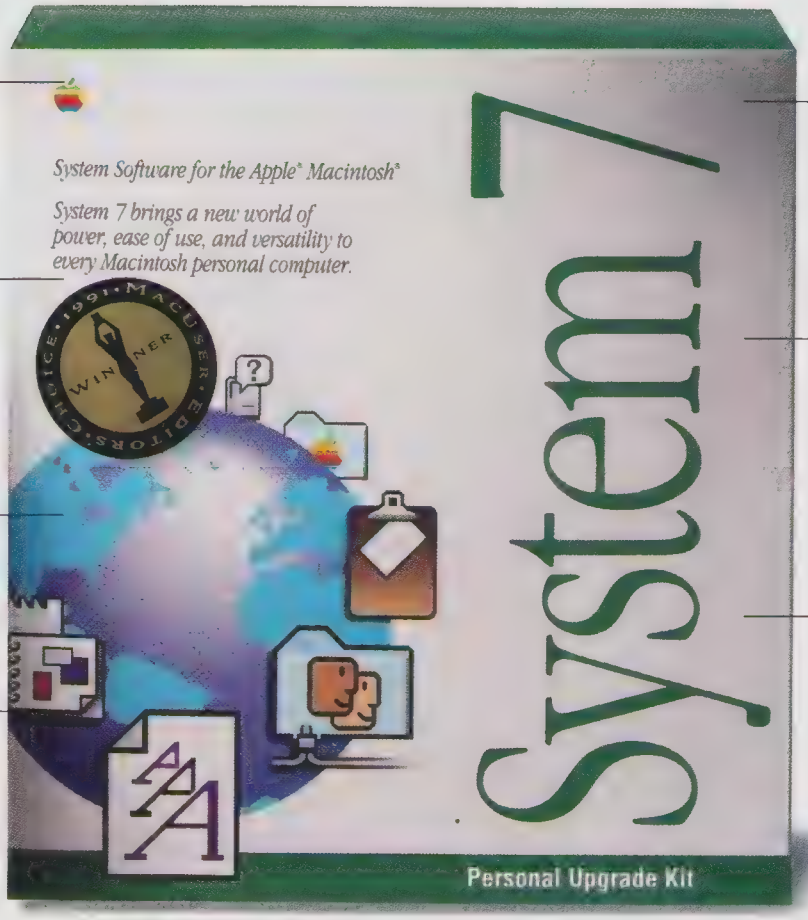
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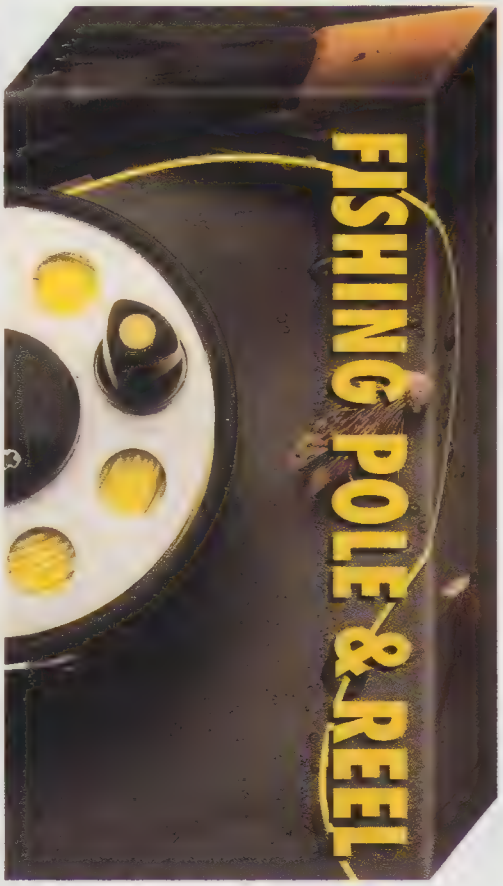

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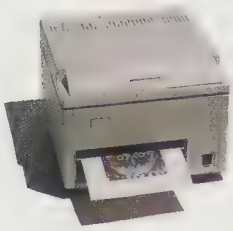

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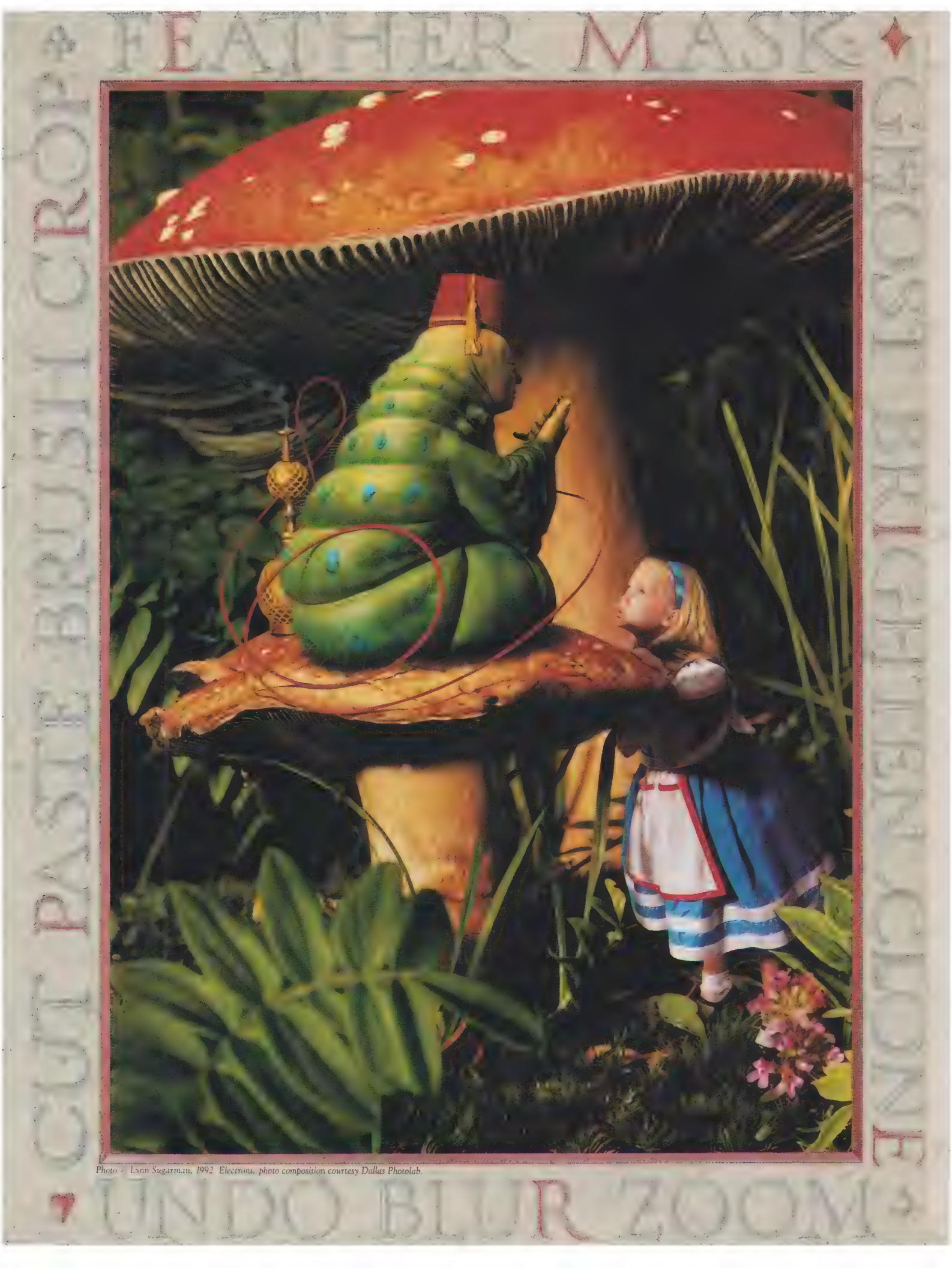

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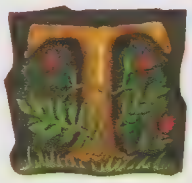
Remember when *anything* was possible?



he Caterpillar and Alice sat for some time in silence. At last, the Caterpillar clicked on the mouse, and addressed Alice in an excited, almost giddy tone.

"What do you *think*?" said the Caterpillar.

This was a new world for Alice. She replied rather shyly. "I—I'm not sure, sir, just at present—I thought I knew this morning, but it's *changed* several times since then. It's getting more real—more beautiful."

"Um. Perhaps the foliage can grow a bit—become fuller, lusher," the Caterpillar retorted. "Shall we *clone*?"

"*Clone*?" said Alice with some degree of amazement. This had to be one more effect of the *System* with which she was unfamiliar. "By all means," she replied politely.

Click. Drag. Click.

"There. More ferns." The Caterpillar again sounded giddy. "What do you think...*now*?"

This new move looked promising, certainly: Alice squinted at the glowing screen and came back again.

"I'd have to say—I *love* it."

The Caterpillar grinned. "Then we shall *print* it."

In no time, Alice was peering down at the evidence of her new experiences—the *transparency*. It was stunning. And it was due. Remembering her extreme deadline, she set out at once to deliver it.

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LETTERS

BLACKSHEAR'S VITALITY

Congratulations to you and hurrah for all of us in your decision to feature one of the most talented illustrators working today, Thomas Blackshear. [His] work is nothing short of stunning, and I could read limitless articles on his stuff if they were available. His subjects ring with a vitality too often absent in portrait work.

I continue to enjoy "Methods of the Masters" and "Shortcuts," and hope you will keep giving us more. Thanks for the consistently excellent quality of your publication in content, design and printing.

Mary A. Shafer
Park Falls, Wisc.

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BLUELINE GUIDELINES

We enjoy your magazine very much and were delighted to find a reference to one of our products in the March/April issue (p. 107, "Painting Directly on a Blueline Template"). The blueline image was prepared using our Guide-Line materials. You've mentioned the process before, but unfortunately, Bill Vann did not mention the product by name. If your readers would like further information, they may contact us at 800-235-6917.

Sandra N. Stites, General Manager
Fluorographic Services, Inc.
Santa Barbara, Calif.

STOCK RESPONSE

Your article on stock illustration was extremely biased against stock agencies. There is fear among illustrators about losing control of their images and having to compete with stock agencies for business, but both these fears are based on ignorance. Your article did little to educate and seemed to fan these fears.

Illustrators always retain copyright control of their images with stock agencies. If they don't want a particular image sold through their agency, then they don't submit it. If they don't want an image sold to certain types of businesses, then they can specify this.

The "control" illustrators you quoted seemed most concerned with was price levels, and on that score they've missed the whole point of stock. Stock agencies are in business to make sales where no sales would have existed before. We sell to clients who would otherwise never consider using any images because of the prohibitive expense of commissioning them. Clients who have the money will continue to spend it on assignments, because creating a unique image with first-usage rights may be a high priority for them. It comes down to this: Use an agency whose network's sole purpose is to market your stock, or try to sell it yourself, between assignments. Using a stock agency does not cut into assignment work; quite the contrary, it frees up the time for assignments that may have been spent marketing stock.

What is lost in commission to agencies is more than made up by the sheer number of sales generated by appearing in an agency's catalog. And the catalogs can draw attention to artists for commissioned work, just like sourcebooks.

(Continued on page 19)

SIMPSON CORONADO SST RECYCLED

THE ART OF RECYCLING

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Impressively bright, opaque and printable, Coronado SST Recycled is sealed with a "special surface treatment" that allows optimum ink holdout.

THE RECYCLED ART OF

GERALD REIS

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The secret is in the "SST" for Coronado SST Recycled. A "special surface treatment" seals Coronado's fibers to provide side-to-side uniformity and optimum ink holdout. Manufactured from specially selected high-brightness recycled fibers, Coronado is clean, white, opaque and remarkably printable. It comes in two versatile finishes—traditional Modified Antique and an Embossed Stipple—and in a wide range of weights from 60 lb. text to 130 lb. Double Thick Cover and 100 lb. Bristol. Coronado SST Recycled is a favorite choice among designers and printers in search of value and printing performance.

About Recycling

Simpson offers more recycled premium grades than any other fine printing paper manufacturer. Available in a range of colors, textures and weights, most Simpson recycled papers—including EverGreen Text, EverGreen Gloss, EverGreen Matte, Gainsborough and Sundance—exceed federal EPA guidelines. Simpson is also the maker of Quest, America's first 100% postconsumer, nondeinked premium paper.

About the Artist

Whether the assignment involves environmental design, interiors, print graphics, product design or packaging, Gerald Reis brings a natural aesthetic consciousness to his award-winning work. His firm, Gerald Reis & Company in San Francisco, serves a nationwide clientele that includes The MacArthur Foundation, The Nature Company and GM's Saturn. Reis' work has been recognized in international design publications.

About the Art

An avowed packrat, Reis reviewed his eclectic collection of interesting discards—broken tiles, dried flowers, old postcards, plaster angels—for inspiration. To create his mask and represent Coronado's worldly appeal, Reis chose postage stamps with nature themes and old scenic postcards sent by anonymous travelers describing wondrous sights of the world. Reis says these "call to mind the delicacy of our planet and the vast pleasures it provides us as we pass through."

For more information about Coronado SST Recycled, please contact your nearest Simpson paper distributor.

C O R O N A D O

S I M P S O N

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(Continued from page 16)

Stock agencies are working *for* illustrators, not competing against them, as your article implied several times. We are trying to create new markets, not destroy old ones. Unfounded fears about stock agencies only hinder greater illustrator participation in and expansion of those markets.

Rolf Sjogren
Illustration Supervisor/Editor
The Image Bank, Inc.
New York, N.Y.

Editors' note: While a number of your points were made in the article, some by representatives from The Image Bank, some by illustrators who spoke with enthusiasm in favor of stock agencies, you make a good case that stock illustration can create markets where they might not exist. Indeed, we concluded that "everyone interviewed for this article agrees that stock work will not replace commissions," and that "stock illustration appears to be an idea whose time has come."

SAD SAGAS

On another topic, our Fax Back Survey, "Ripped Off?" in the "Legal Side" department elicited numerous tales of woe, some of which included supporting artwork. There was an illustrator whose map for a Washington, D.C., newspaper showed up on local T-shirts, a graphic designer whose paint schemes showed up on a competitor's boats, another illustrator whose work was traced. Here is a follow-up letter from the illustrator whose work was featured in that "Legal Side" column on plagiarism.

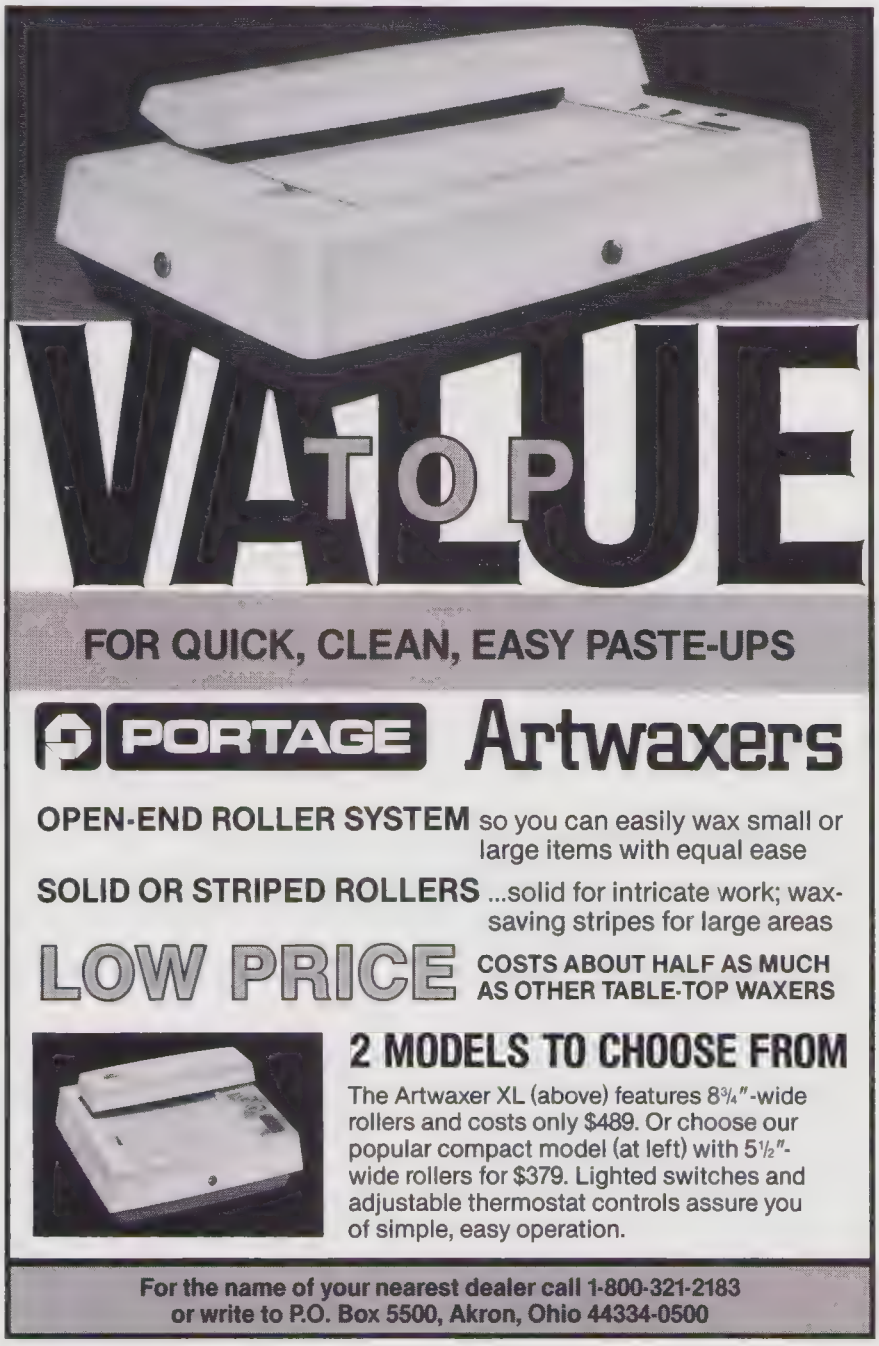
I would like to contribute my own point of view as the plaintiff in the federal court case, Mistretta v. Hunt, et al.

First, as an artist, I encourage inspiration and emulation by aspiring artists when done purely in the spirit of learning and teaching. Second, as a business person, I have gone to great lengths to protect my series of New Orleans Mardi Gras posters from being subjected to over-saturation in a small marketplace. I have turned down lucrative offers to license the images to prevent diminishing their value as an ongoing poster collection. Since it is I who carefully crafts the direction for the images, I believe the copyright law allows me, as the sole owner, to exploit my signature-style images the way I see fit, and not to serve as a vehicle of success for another person with relatively little experience, a large advertising budget, and a history of publishing the "look and feel" of another contemporary artist, [and whose] success [would] destroy what I worked so hard to maintain.

I would like to thank *Step-By-Step* for serving as a forum for the discussion of this topic. The honest heart and soul knows at what point influence crosses over to become plagiarism and when imitation becomes theft.

Andrea Mistretta
Waldwick, N.J.

Editors' note: We will continue to explore the problem of protecting one's work in future issues. ■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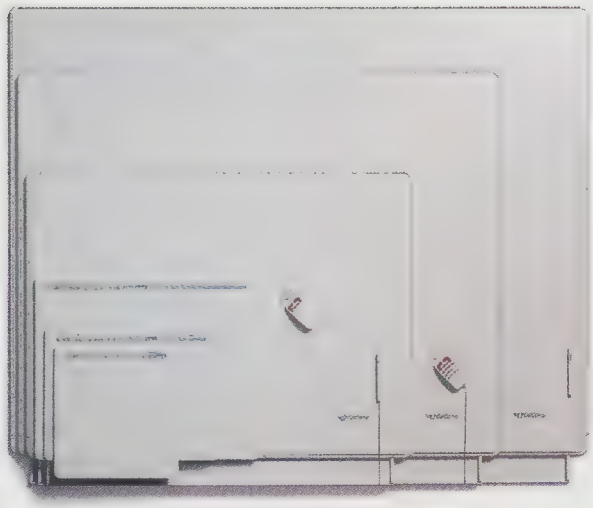

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(Widows and Orphans Welcome.)

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CAREER TIPS

Helpful hints covering a variety of professional issues.

GETTING HIT WHERE YOU LIVE—AND WORK

If you work out of your home, it might be wise to check your local zoning ordinances to be sure you are not in violation. Roger Citron, owner of Design Lines Inc., of Andover, Mass., got an unexpected education in zoning law when an anonymous call was placed to his local zoning board, complaining of the business he and his two sons run out of his home.

A series of expensive and time-consuming legal problems ensued. A building inspector (who Citron says did not initially visit his property in person) informed the illustrator and designer that he was not engaged in a "customary home occupation" (the terminology many municipalities use to describe an occupation generally done in the home) and reported him to the local zoning body. It ruled that he was a commercial retailer and ordered that he "cease and desist operation" immediately.

Citron appealed the decision to his local zoning board of appeals and finally convinced the building inspector to visit his property. But Citron says the visit did not convince the inspector, who expected to find a lonely painter's garret, not a modern design studio filled with computers. So Citron, with the help of an attorney, undertook some research.

He studied the zoning laws, which actually list the "customary home occupations" that are allowed. He found out how many other people in his area were actually working out of their homes and whether or not they were encountering the same zoning difficulties. He contacted professional publications (including *Step-By-Step Graphics*) for advice. Citron eventually won his appeal.

"You have a right to work out of your home, but it varies from city to city and state to state," he explains, adding that some cities do not permit "customary home occupations." In Philadelphia, Pa., for instance, people who work out of their homes must obtain a special permit; otherwise, they are in violation.

Citron offers this advice to persons facing the same legal problem:

- Compare notes with other home-based business persons in your area. If they aren't being similarly penalized, "you can demand equal treatment under the law," he says.
- Do your homework and be certain you are in the right—and can prove it—*before* you approach any governing body.
- Most important, stresses Citron, is to hire a lawyer who is a zoning specialist. Guaranteeing your livelihood is worth the investment, he says.

ELECTRONIC FARM TEAM

The next time you are in need of an experienced, electronically savvy graphic designer or illustrator, consider growing your own. Graphic Corporation of America, a New York-based graphic design firm, planted the seeds for its first harvest in 1990 when it equipped Cornell University's School of Fine Arts with high-end computer graphics equipment which mirrors that found in GCA's computer department.

Working with Cornell's computer art program, GCA invited approximately 10 students to participate in a unique independent study program. In addition to having access to the latest equipment, the students attend lectures by Cornell staff and GCA designers and art directors. GCA staff members also present real-world design assignments to the students; the participants devise creative "software solutions" as part of their course work.

At the end of the school term, GCA hires several students to work as interns for the summer. One former intern was recently hired for a full-time position.

Tom MacKay, architect of the program and CEO of GCA's parent company, Nelson Communications, Inc., hopes to groom many more future employees through his program, and perhaps expand the program to include other schools. "It gives conceptually oriented students a chance to work with the technology," he explains, noting that he is very pleased with the students' performance thus far. "The last committee we organized to select summer interns could hardly make a decision. All of the work they saw was very good."

PERSONALIZED WANT ADS

"Artist needed to do designs for T-shirts for export. First printing will be seven designs."

"Mac artists needed for work in North Jersey area."

"Graphic designer needed to take over production of twice-yearly publication."

The blurbs above are just a few sample entries from a new semi-monthly newsletter called *JOBline News*. Published by the Graphic Artists Guild of New York and available on a three-month subscription basis ($30 for members, $40 for non-members), the newsletter lists part- and full-time job openings in the New York area. Clients can place openings for graphic designers, illustrators, surface designers, cartoonists, textile designers and computer designers free of charge. Graphics professionals can also place paid classified ads, offering office or studio space, for instance.

Katie Gallagher, organizer of the newsletter, says the response from clients and artists has steadily increased since the publication's launch in September 1991. "Clients find they aren't inundated with replies as they are when they place an ad in the *Times* or the *Voice*. They are contacting a very concentrated audience. Artists are realizing that they will receive at least a certain number of leads from *JOBline*," she says.

Gallagher adds that potential clients are beginning to use the newsletter in a new way: to solicit artists' portfolios before a job arises. She says that this practice is especially helpful for art directors who have recently changed jobs and need to build a reliable new roster of graphics professionals.

To start your own regional list, Gallagher offers this advice:

Spot illustrations by Bonnie Timmons

• Find out what clients need and what subscribers want. For instance, do artists just want the leads, or would they also like to be connected with the client?
• Free listings encourage clients to participate.
• Watch newspaper business sections for promotions, new hires, and so on. Every change could mean new business for a graphic artist. Contact those businesses to inquire if they would like to place an ad.
• Tie the newsletter's launch to a larger event, such as an awards show or portfolio night, so that you contact a larger initial readership.

Gallagher adds that she would like to work in conjunction with similar services in other cities to help graphic artists who may be relocating. For more information, contact the Graphic Artists Guild of New York, 11 West 20th St., New York, NY 10011; (212) 463-7759 or fax (212) 463-8779.

WHAT REPS ARE LOOKING FOR

When you go looking for a rep, keep these factors in mind.
• Reps are self-employed and have the same concerns you do for sales, overhead and profits.
• For maximum profitability, reps look for specific photography and illustration styles or expertise valuable to such large volume buyers as advertising agencies and design firms.
• Though you may work in several different styles, reps may only represent your work in a specific style that does not conflict with the talent they already represent.
• Reps are concerned about a complete marketing strategy and often require their artists to buy ad space or plan direct mail campaigns.
• Reps look for talent they feel will be "partners" in selling, those who have specific goals for growth and the desire to be successful.

–Maria Piscopo

PREPARING FOR CHANGE

American Demographics magazine projects that, by the year 2020, the number of people over 50 will increase 74 percent and the number of people under 50 will increase only one percent. What does this have to do with you? Everything.

In fact, these changes are beginning to take place right now, and your clients will have to change along with their customers. They have to determine what goods and services will be most in demand and what can be dropped. Products and services in health, nutrition, travel and leisure are expected to increase in appeal. Your own portfolio and promo pieces must reflect the design and illustration needed to sell these services and products. Illustrators will need images that show older people at work and at play. Designers will need to show packaging and sales materials for the mature market. Your clients cannot ignore the spending power of this fast-growing group of consumers. Neither can you.

–Maria Piscopo

SEEING THE LIGHT

Working on computer screens has engendered a host of problems in the workplace. But the benefits of using computers so outweigh the negatives that many firms are coming up with imaginative ways to deal with problems they encounter. For example, Ovation Marketing of LaCrosse, Wis., an agency specializing in mail-order clients, installed new warmer fluorescent lights that reduced glare from white paper and computer screens. "We were faced with buying a $300 to $400 glare shield for each computer in our office," explains Christopher Colbert, head of public relations for the firm.

But the change had a less obvious, physiological benefit as well. "Before, employees complained about headaches from the bright fluorescent light," says Colbert. "But the color of the new lights is more like incandescent lights. Everything doesn't look so sterile; it's more like working in your home."

Gary Steffy, president of Gary Steffy Lighting Design, Inc., Ann Arbor, Mich., notes that there is a trend toward "friendlier" lighting in the office. "Triphosphor lights are being specified more and more," he explains, noting that these lights are available in warm (3,000K), neutral (3,500K) and cool (4,100K). (Ovation Marketing is using the 3,500K lights.) "These lights have a very crisp appearance that isn't harsh," he says, adding that design offices should also have a 5,000K viewing booth or room for checking critical color.

In addition to a healthier lighting scheme, Ovation employees enjoy other benefits, including an exercise room, showers, a steam room and a "pillow room" filled wall-to-wall with down pillows for brainstorming sessions.

NEWSLETTER START-UP TIPS

Thinking about starting your own newsletter? Here are a few tips on cutting costs, excerpted from "90 Ways to Save Money on Newsletters," by newsletter design expert Polly Pattison.
• To save on mailing costs, design your newsletter so that it does not have to be sent in an envelope. Also, sending bulk rate instead of first class can save about 33 percent on postage, although it isn't as timely.
• Use a light-weight paper: Not only is it less expensive than heavier stock, it reduces your mailing costs.
• Some typesetters and service bureaus charge by the page, others by the hour. Shop carefully for the service that best matches your needs.

For a copy of the brochure, send $6 to Polly Pattison, 5092 Kingscross Road, Westminster, CA 92683. ■

This column was written by Step-By-Step Graphics *editors and Maria Piscopo, an instructor for DGEF's Business Side of Graphics.*

Signage and the Disabilities Act

What every designer must know about a new law regulating public signage.

By Marianne Goldsmith

An important federal law passed in 1990 will probably affect your design practice, the building you work in, or both. The Americans with Disabilities Act (ADA), based on the Civil Rights Act of 1964, is now in effect, and seeks to broadly protect the civil rights of disabled individuals, prohibiting discrimination in employment and access to goods and services. The law contains accessibility requirements, including new standards for signage, to make facilities accessible to persons who are blind, visually impaired or mobility impaired.

As with any new legislation, there are many gray areas and confusing loopholes. Because of the analytical and educational efforts of professional organizations, such as the Society for Environmental Graphic Design (SEGD), as well as the American Institute of Architects (AIA) and the American Society of Interior Designers (ASID), the ADA guidelines may eventually be clarified to help architects and designers work together with their clients to provide appropriate signage.

The SEGD recently held conferences across the country to begin to establish intelligible interpretations of the ADA and its regulations for designers who must contend with its sometimes vague terminology or absence of useful standards. This article is a general overview of the ADA guidelines as they apply to the design of signage and is based on the SEGD White Paper on the ADA, available to non-members (see sidebar "ADA Resources"), a highly recommended reference for designers of signage and wayfinding systems. It must be emphasized that these guidelines are only an interpretation of the law. The SEGD recommends that designers carefully weigh their design choices in light of the new act and be prepared to defend them in court if they are challenged.

WHO IS AFFECTED

According to statistics, roughly 20 percent of the population comes under the category of "disabled." By the year 2000, the figure is expected to reach 50 percent. The term "disabled" extends to persons with visual, hearing, locomotor and certain mental disabilities.

If you do not consider yourself part of this group, think again. In your lifetime, the likelihood of incurring some form of disability, temporary or permanent, is rising. As our population ages and lives longer, more and more people will rely on facilities that accommodate their disabilities. There is a growing need for telephones for the hearing impaired, ramps for those who use wheelchairs, and tactile and Braille signage for the visually impaired. If you work in a space that falls under the ADA specified category of "public accommodations and commercial facilities," compliance is your responsibility.

SIGNAGE SPECS

The ADA regulations cover five areas, divided into titles: Title I, Employment discrimination; Title II, Public services and transportation; Title III, Public accommodations and commercial facilities; Title IV,

(Continued on page 33)

ADA Compliant Signage for the Texas Eastern Pipeline Co. by Fuller Dyal & Stamper Inc., Austin, Tex., was designed with the ADA specifications in mind. The ¼-inch painted and polished aluminum letterforms stand off the wall surface with accentuated fasteners at a maximum of four inches, as limited by the ADA. The edge-lit glass quote panel uses ⅝-inch cap height letterforms. Because the glass unit does not have to comply with ADA tactile requirements, the designers specified upper- and lowercase Bodoni.

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No one has to tell you how important lighting is to your work. Yet think about the limitations artificial light imposes. It strains the eyes. It's bluish, or too yellow. It's not bright enough; too harsh; casts strong shadows. Face it. Technology has not kept up with your specific lighting needs — until now.

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CASE STUDIES OF ADA COMPLIANCE

A recent example of designers working with ADA guidelines is the interior signage system developed by the Austin, Tex., firm of Fuller, Dyal & Stamper for the Texas Eastern Pipeline Products Company (TEPPCO) and Ziegler Cooper Architecture. The firm was required to incorporate guidelines of the ADA, based upon their interpretation of the Act. All permanent room signs were required to carry Grade 2 Braille along with tactile lettering and high contrast background. In researching the design, the designers were unable to find a fully scalable Braille font that could be installed, accessed and manipulated as readily as a Bodoni or Helvetica face. "We took the opportunity and spent many unbilled hours developing a scalable Braille type font," explains Steve Stamper of the firm. "The result was what we now call Braille Font, and we are currently making it available to the industry for a nominal fee in order to recoup our development costs." (See ❶ through ❹.)

Another case study of working within ADA guidelines is Gensler & Associates signage program for the new addition to the San Francisco Moscone Convention Center, a large facility that hosts thousands of people year-round for meetings in large spaces, the configurations of which change on a daily basis to meet the needs of various events such as workshops, seminars and speeches to large audiences. Gensler in-house designer Tom Horton worked on a program using Helvetica to match existing facility signage and to comply with ADA guidelines for the new rooftop ballroom space and underground exhibit hall. Horton explains, "We needed a program to move large numbers of people in and out of the space quickly. The major challenge was to provide a flexible program of room identification graphics in the ballroom areas, where movable walls can create many different configurations of meeting rooms. We achieved this through retractable synthetic banners which can be raised and lowered to identify different room entrances, supplemented by wall-mounted 'sign clips' which hold showcards or event information, and use both raised and Braille typography." (See ❺ through ❽.)

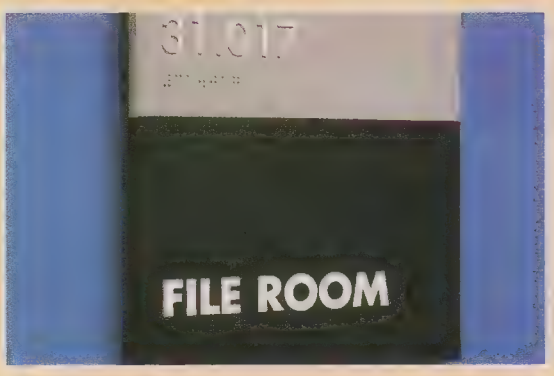

Figure 1 Fuller Dyal & Stamper designers interpreted the ADA legislation for identifying such permanent rooms as the File Room to mean the letterforms must be simple or sans serif (Futura Light), ⅝-inch cap heights, raised 1/32-inch with accompanying Grade 2 Braille. As interpreted in the ADA legislation, all caps are used for room names.

Figure 2 All caps are used for restroom signs, but according to ADA specs, the gender symbol must also be used. The ADA requires the symbol to be six inches in height from border to border with the verbal description below. The designers elected not to use the bordered symbol; this left a five-inch raised pictogram. Placing the word "Women" below the symbol did not fit in with the overall signage grid, so the designers elected to place it above.

Figure 3 Fuller Dyal & Stamper designers discovered a conflict between the city of Houston codes and those specified by the ADA. The ADA mandates that raised characters be mounted on the wall next to the door. But the city of Houston requires three-inch cap height stair designations, and the stair signs have to mount to the door. Who governs? Is the stair a permanent room sign or a directional sign? Whichever interpretation is adopted affects the specifications.

Figure 4 Since the ADA only requires tactile signs on permanent spaces, signs giving general direction and information do not have to comply with the all cap rule. In this case, the designers specified upper- and lowercase letterforms but used the same typeface required for tactile signs.

Figure 5 For signage in the expanded area of the Moscone Convention Center in San Francisco, Gensler and Associates followed ADA guidelines in the lobby areas, which included a minimum of three-inch characters and symbol signs (Helvetica regular was specified), an 80-inch clearance from the floor to the bottom of the ceiling sign, and a 70 percent contrast between the type characters and background color.

Figure 6 The telephone and first aid entry signs in the Moscone lobby area use pictograms and upper- and lowercase sans serif type, which fulfills the ADA specifications. Without the specifications, designer Tom Horton of Gensler and Associates may have used the symbols without typography.

Figure 7 In keeping with the ADA specifications, this room identification sign at the Moscone Center, which falls into the permanent space category, uses raised typography and raised Braille characters. It also has an internal "sign clip" mechanism to hold event information.

Figure 8 These semi-transparent banner signs retract into the ceiling when the flexible meeting room is reconfigured into a large ballroom. These signs fall into the flexible category and are therefore not subject to ADA rules. For design consistency, however, individual room numbers mounted on the walls used raised letters and Braille, which does meet specifications.

(Continued from page 28)

Telecommunications; Title V, miscellaneous. Signage requirements and guidelines are discussed in Title III, the entire text of which is available from the Department of Justice Federal Register. (See sidebar "ADA Resources.")

The ADA applies to new buildings as well as to existing structures. Standards of compliance are highest for public accommodations or commercial facilities with building permits issued after January 1992. Mandated alterations to existing facilities involve removal of "architectural and communications barriers." When and how such barriers are removed depends on the expense of altering the space.

In order for a space to be readily accessible to and usable by people with disabilities, the guidelines direct building owners/employers to apply the term "readily achievable" as the criteria for an existing facility to be modified. At minimum, this could mean that, in a given location, people with disabilities could easily park a vehicle, enter, and find their way to an appointed destination, as well as use the telephone, restroom, drinking fountain or elevator. In any case, signage would be a key part of the picture.

Suggested priorities for barrier removal include installing entrance ramps, providing accessible parking, rearranging display tables in retail sites or adjusting display racks, providing accessible signage to restrooms, widening toilet stalls, widening doors and entrances, and installing visual alarms. The IRS allows deductions of up to $15,000 for expenses associated with removal of barriers.

According to SEGD interpretation, the stipulation requiring "removal of communication barriers in existing public accommodations" can be achieved by modifying existing signs or by installing new ones. Basically, the law mandates clear and visible signage in any space to which the public has access.

The term "public accommodations" has been interpreted to apply to no less than 12 building categories, ranging from sites such as a motel, restaurant, theater or cinema, retail store, business or professional office to a laundromat, museum, library, park, zoo, school, community center, gym or golf course. Unfortunately, the term "commercial facilities" is not illustrated in the act by specific examples. The current SEGD interpretation of the latter applies to signage in factories, warehouses and office buildings "to the extent they are used only by employ-

ees of the facility and are not generally open to the public." Exempt facilities include private clubs, health care and other facilities owned by religious entities and to railroads.

Signage regulations encompass four categories of interior and exterior signs: permanent room designation signs, directional signs, informational signs, and finally, overhead signs.

According to SEGD interpretation, signs designating permanent rooms and spaces are required to comply with the new standards. Signage must include tactile and Braille lettering raised at least 1/32-inch from the plaque surface. Signs must use exclusively uppercase characters of at least 5/8-inch cap height, but not exceeding two-inch cap height. SEGD reviews type style and proportion as follows: "Type style shall be 'sans serif' or 'simple serif' and characters must have a width-to-height ratio of between 3:5 and 1:1 and a stroke width-to-height ratio of between 1:5 and 1:10. The use of pictograms or symbols on permanent room designation signs is optional, but where used they must be located on a border or field of at least six inches in height. An equivalent Grade 2 Braille and tactile written description must be placed directly below the symbol (with the exception of arrows) and may not intrude into the six-inch field specified above."

Regarding contrast quality, SEGD interprets the ADA guidelines as follows: "Characters and background must be eggshell, matte, or other non-glare finish, which is recommended as between 11 and 19 degrees on a 60 degree glossimeter. Characters are recommended to have a minimum 70 percent reflectance contrast with their background."

For wall-mounted directional signs, tactile and Braille lettering are not required. Character proportion, sign finish and contrast requirements do apply, but upper- and lowercase characters may be used. Overhead signs must have at least 80 inches of clearance below the bottom of the sign. Minimum cap height is three inches, and characters can be upper/lowercase, but must observe character proportion, height, sign finish and contrast requirements.

The ADA requires that entrances, restrooms, bathing facilities, parking spaces and loading zones display the international symbol of accessibility at all accessible entrances to buildings. Areas of emergency rescue assistance are also required to be designated. Other international symbols

ADA RESOURCES

Accompanying the ADA law are detailed regulations with implementation guidelines for professionals. These guidelines are administered by a government agency known as the Architectural and Transportation Barriers Compliance Board (ATBCB), as set out in the publication, "Minimum Guidelines and Requirements for Accessible Design." If you or your practice design signage for public buildings or wayfinding systems, obtain and study this material, known as the Americans with Disabilities Act Accessibility Guidelines (ADAAG). You may also want to consult with the ATBCB, which offers technical assistance on architectural, transportation and communications accessibility issues. Consult the following government agencies and professional organizations for more information on the ADA.

For regulations, technical assistance and enforcement for titles II and III of ADA:

Civil Rights Division
Office on the Americans
with Disabilities Act
U.S. Department of Justice
P.O. Box 66118
Washington, DC 20035-6118
(202) 514-0301

For Minimum Guidelines and Requirements for Accessible Design, technical assistance:

Architectural and Transportation
Barriers Compliance Board (ATBCB)
1111 18th Street NW, Suite 501
Washington, DC 20036
(800) USA-ABLE
FAX (202) 272-5447

For the SEGD White Paper ($20.00/copy) and copies of ADA pictograms on Macintosh discs:

The Society for Environmental
Graphic Design (SEGD)
47 Third St.
Cambridge, MA 02141
(617) 577-8225
FAX (617) 577-1769

For the booklet "What Businesses Must Know about the Americans with Disabilities Act":

U.S. Chamber of Commerce
Labor and Human Resources Dept.
1615 H St. NW
Washington, DC 20062
(202) 463-5502

For the video conference series, "Opening All Doors: Understanding the Americans with Disabilities Act," bibliographies on periodicals, books on barrier-free design and an information packet on how the ADA applies to architectural design:

The American Institute
of Architects (AIA)
1735 New York Ave., NW
Washington, DC 20006-5292
(202) 626-7300
FAX (202) 626-7421

For courses which are available through local chapters on barrier-free design, interiors for elderly and disabled, and ADA compliance:

American Society
of Interior Designers (ASID)
Educational Department
608 Massachusetts Ave., NE
Washington, DC 20002
(202) 546-3480
FAX (202) 546-3240

For the Grade 2 Braille Font for signage:

Fuller, Dyal & Stamper Inc.
1711 S. Congress Ave., Suite 300
Austin, TX 78704
(512) 447-7733
FAX (512) 447-2202

must be displayed to indicate location of telephones or listening systems, areas of rescue assistance and other equipment that extends accessibility. The symbols have been modified by SEGD to improve readability and are currently available in EPS format on 3½-inch Macintosh discs.

The ADA does not apply to signage which contains temporary information, such as building directories, menus, or signs listing the occupant's name. Also excluded from compliance with the guidelines are architectural signs, if they are installed in addition to required ADA signage. The SEGD interprets "architectural" to mean architectural, formal, honorific or decorative signs which may also be informational.

GRAY AREAS

ADA guidelines are unclear when specifying typographic standards. For example, while "sans serif" is an acceptable typographic term, there are some sans serif faces that are more legible than others. And "simple serif," another ADA typography suggestion, is simply not a professional term. In the white paper, the SEGD has developed a suggested list of typefaces, which has no legal stamp of approval, selected for legibility and potential adaptability to ADA signage standards. Some sans serif styles considered acceptable by the act include Futura, Frutiger, Gill Sans, Helvetica, Optima and VAG rounded. "Simple serif" examples include Bodoni, Century Schoolbook, Garamond, Glypha, Palatino and Times.

In terms of width-to-height ratio, the SEGD notes that no formula for basing the calculations has been stipulated in ADA regulations. Measurement standards suggested include using the capital letter "O" and numeral 0 for width-to-height ratio, and the capital letter "I" and numeral 1 for stroke width-to-height. The SEGD recommends that these regulations be re-examined in light of discrepancies between choices of letterforms and their varying proportions and legibility. In the interest of legibility, the SEGD also recommends close attention to letterspacing when designing and fabricating ADA-compliant signage.

Translating Braille is another area of caution addressed by the SEGD paper. Braille Grade 2 is required by the ADA, and it is important that the form of the dots be smooth and easy to read with one's fingers. Correct Braille spelling and use of numerals and punctuation should be checked by a

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professional Braille proofreader.

Another area of discussion by the SEGD deals with viewing distance for overhead directional or "flag" signs. The ADA requires overhead signs to have a cap height of at least three inches. This does not apply to other kinds of directional signs. Cap height is to be "sized according to viewing distance." Determining viewing distances for signs in spaces that vary from airport concourses to long institutional corridors can pose a problem, and the SEGD white paper points out the limitations of current regulations when applied to situations such as hospital corridors with limited headroom.

Identifying permanent rooms and spaces is another gray area, where, technically speaking, ADA regulations apply only to the specific identification—a room number, for example—that will not change. Other parts of the sign do not necessarily have to be spelled out in Braille or use raised lettering, but the SEGD paper encourages designers to include these features, in the interest of providing effective wayfinding for all people.

YOUR LIABILITY

As a design professional, your approach to the ADA should be to make a good-faith effort to comply with the existing regulations. Keep files of your work on signage projects requiring ADA compliance. Establish a paper trail of what you understood compliance with ADA to be as applied to a particular project.

One legal expert recommends that you retain an attorney to assist you in adding a disclaimer to your standard contract with a client. The disclaimer should state in effect that when you design signage for the client, the work is performed according to your interpretation of ADA regulations.

If you are involved in a lawsuit which alleges failure to comply, you will more than likely be involved in a third party action to a suit, along with the architect and the engineer on the project. Keep in contact with code officials. Arizona attorney David Jones, who frequently lectures on the ADA, advises, "In some cases, to shield both the client and the designer's business, it might be wise to hire an attorney as a go-between."

OFF-THE-SHELF COMPLIANCE

What is described as "ADA-compliant" stock signage is available from a variety of fabricators. Adhesive lettering and punched Braille strips are now on the market. For designers specifying compliant signage on a project, fabricators are using techniques such as zinc and plastic polymer photoetching and reverse engraving to produce modular ADA sign systems. Investigate these alternatives carefully, and evaluate the seller's reputation for quality production and service.

Another caveat: Recently the AIA issued a warning concerning parties who are of-

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fering their services as "Certified ADA consultants." Such a title does not exist. Contact the ADA regulatory agencies listed in this article or your local chapter of AIA for more information.

THE LONG VIEW

It is hoped that the effect of the ADA on the design community will be to advance the principles of universal design, which advocate technology and architecture that is usable by as many people as possible. The need for universal design embraces everything in the material environment: narrow doors and elevators, clumsy kitchen utensils, hazardous elevators and unprogrammable VCRs. The principles of universal design inform the SEGD's suggestion that signage reform extend to the development of total directional or wayfinding systems. The organization has suggested that wayfinding systems be part of the strategy for providing adequate directional information to disabled users. Tactile maps, "talking signs" and other systems could benefit many people, including those with mental retardation and the functionally illiterate.

In evaluating the current regulations, the SEGD has identified several aspects of required signage that deserve re-evaluation. For example, clarification is needed in specifying requirements for signs with contrasting lettering and background.

The use of tactile letters in public signage is currently designated as an all caps message. On the other hand, most words are read as a single "footprint" in upper- and lowercase. The all-caps requirement fails to address this typical method of word identification for vision-impaired readers for whom tactile lettering was specified in the first place.

For design professionals, the advent of the ADA emphasizes the need for thinking about design with a more realistic attitude toward the end-user. As the public responds to more accessible facilities, the ADA will probably undergo modifications and revisions. In this area, designers stand a good chance of influencing the direction of these developments, creating workable and appropriate interpretations of these evolving regulations, which affect the everyday lives of all Americans. ■

Marianne Goldsmith is a freelance writer and publicist based in the San Francisco Bay-area who covers business, high tech and the arts.

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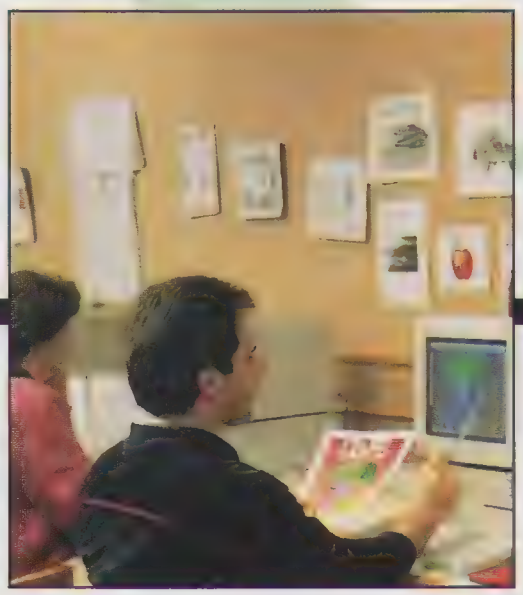

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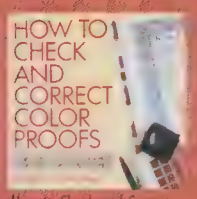

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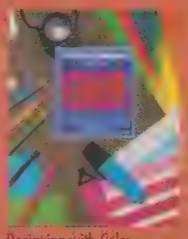

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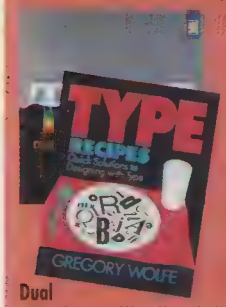

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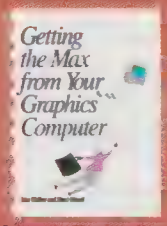

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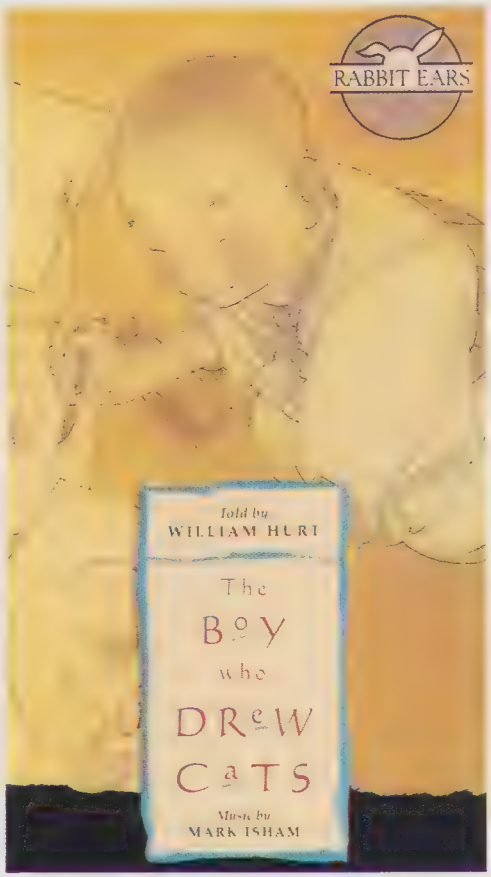
Masterful Line for a Children's Video

Inspired by the masters' use of line, artist David Johnson does 230 ink and airbrush illustrations for a high-tech kid's video.

By Susan E. Davis



It is not uncommon for an artist to search for new outlets for creative work, but it is unusual when an artist is asked to do an assignment that ends up adding an entirely different dimension to a career. In your dreams, right?

It happened to illustrator David Johnson. Known for his pen-and-ink portraits that regularly grace the Sunday Book Review section of *The New York Times*, Johnson's career took off in a new direction after he got a call in 1988 from Mark Sottnick of Rabbit Ears Productions, Inc., to illustrate its production of "Thumbelina." Rabbit Ears, an award-winning producer of high-quality videos for children, was founded by Sottnick and Doris Wilhousky in 1985. Since then, it has created more than 40 videos with teams of top illustrators, actor/narrators and musicians. (The company also markets books, cassettes and compact discs.)

"David feels like a member of the family now," says Sottnick whose offices on an estuary in Rowayton, Conn., are just a short drive from Johnson's home in New Canaan. Johnson, who is currently working on his third project for Rabbit Ears, seems to agree, often dropping over in time for lunch. Says Johnson, "Rabbit Ears offers total artistic freedom. Artists don't have much of that."

In addition to expanding his artistic repertoire—Johnson has introduced airbrushed watercolor washes to his pen-and-ink drawings—he also writes his own scripts. That came about when Johnson didn't like the writer's interpretation of the second project he elected to do, "The Boy Who Drew Cats," a Japanese fairy tale retold by Lafcadio Hearne. Johnson's high school teacher and mentor, Bernice Hall, had given him the book 20 years ago as a present. "Like a fool who doesn't know what he can't do, I agreed to do the adaptation," relates Johnson with a grin.

But his efforts paid off. After some additional wordsmithing by Rabbit Ears' director Craig Rogers and editorial director Eric Metaxas, Johnson's adaptation was used. Admits Johnson, "I had a lot of fun lining things up. That's the one part of writing I remember liking. It's like one of those sliding puzzles where you have 16 squares and one is empty and you have to get all the numbers lined up. I had a visual image in my head."

Translating that visual image was another matter. It took six months to draw and paint the 230 illustrations needed for the video. He did ten illustrations a week for six months—at

Line and Wash These pen-and-ink and airbrush paintings are part of the 230 illustrations David Johnson created for the video, "The Boy Who Drew Cats." The 30-minute video, produced by Rabbit Ears Productions, Inc., is narrated by actor William Hurt and features original music by Mark Isham. A book, cassette tapes and a compact disc with a poster complete the package.

Photos by Roy Gumpel

the rate of two each weekday, or occasionally five in one evening.

Once the art was complete, Craig Rogers shot Johnson's images, using dissolve animation techniques and high-definition technology, and melded the visual images together with an audio tape containing the previously recorded narration by actor William Hurt and original music by Mark Isham.

To give you an understanding of Johnson's approach, *Step-By-Step* followed him as he drew and painted one of the images that appears in "The Boy Who Drew Cats." He used the same basic process for each of the 230 drawings.

DRAWING

Johnson liked the idea of adapting and illustrating the story because it has lots of positive elements. "People like cats, and it's got a hero whom kids can easily identify with," notes Johnson, who lives with two cats in a spacious attic apartment atop a huge old house in New Canaan.

Once his written adaptation of the story was accepted, Johnson concentrated on a visual plan for the video. Using rough thumbnail sketches, he made a storyboard of the 230 illustrations he would later draw ❶. This kind of storyboard is the first step completed in most kinds of filmmaking. It's the equivalent of a dummy or layout in 2-D work.

Rogers reviewed the storyboard with Johnson to make sure there were enough images of the right subjects at the right angles. "David's good at making schematic drawings," remarks Rogers. "With him it's mostly an editing process—how to reduce the number of images—which is very unusual. What you write you don't have to illustrate."

That Rogers ended up cutting several dozen drawings at this stage pleased Johnson. "It's great when Craig throws stuff out; I feel like I can take a night off," quips Johnson. "But I have to give Craig a lot of credit be-

cause other people do very tight storyboards. Mine aren't."

THE PENCIL SKETCH

Once the edited version of the storyboard was acceptable to everyone, Johnson began the final drawings. "Some days I can do a virtuoso drawing right off the bat, and sometimes it's very sketchy," admits the artist. "I'm very critical; sometimes it gets self-destructive. I've let a whole drawing get away from me to correct some minor point of penmanship." Drawing quickly in pencil, Johnson outlined the priest's head and began developing the features ❷.

Because Johnson likes to work at all times with a very sharp point on his pencil, he keeps two pencil sharpeners handy: a Koh-I-Noor that is attached to his large, industrial-size drafting table and a portable one. Besides a high drafting chair at the table and a well-used upholstered chair, the only other thing in the room is a full-size plastic skeleton, which Johnson refers to constantly as he works. Even on an overcast day light pours into his studio from all four directions.

Johnson erases frequently as he works ❸. "I change a lot," he explains. "It's an organic process. I'm so used to doing it, I don't think about it. Eventually, I try to end up with a tight drawing in pencil that solves most of the problems, so when I go to ink, all I have to do is go over the pencil line."

The illustrator shuns photographic reference, preferring to use the skeleton for anatomical details and his imagination to establish character. Once he is sure of his lines—the angles, placement and anatomy—he may darken them slightly ❹.

INKING THE DRAWING

Convinced that the pencil drawing is as tight as he can get it, Johnson switched to his favorite pen, a Uniball made by Faber-Castell, and carefully drew over

Continued on page 46

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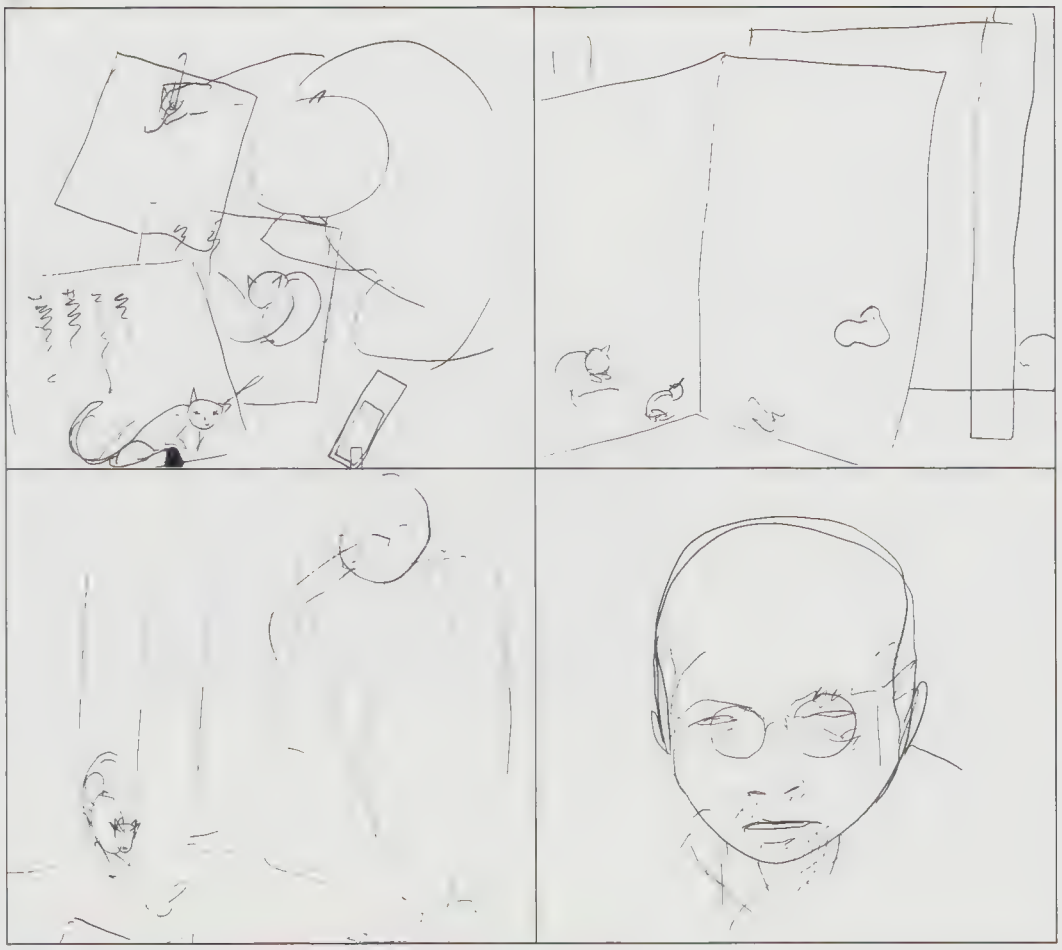

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1 Johnson does a sketch of each of the 230 illustrations to be used in the video, making sure there is continuity between each visual. After this storyboard is reviewed for appropriate subject matter and correct camera angles by director Craig Rogers, Johnson numbers the drawings in the order they will appear.

2 Working with a Caran D'Ache Swiss-made drafting pencil loaded with No. 2H lead, Johnson does a preliminary sketch of the priest's face. Note that Johnson changed the angle of the face from a frontal view in the storyboard to this side view.

FROM WATERCOLOR TO VIDEO

During the six months that David Johnson was creating the illustrations for "The Boy Who Drew Cats," Rabbit Ears director Craig Rogers was busy planning the audio portion of the project. Rogers lined up actor William Hurt to do the narration, and by the time Hurt was finished, he had done three readings, each recorded on digital audio tape (DAT) at Presence Studios in East Haven, Conn. Rogers then electronically edited the readings on a disc-based editing system called the AMS Audio File at ServiSound Studio in New York City.

"AMS gives you a lot of opportunity to edit things and play around with sound in ways we couldn't do before," notes Rogers. "Once we've got the narration strung end to end, we can figure out where we want to put the music. We insert breaks in the soundtrack, and then we know how much time it's going to take. At that point we review the storyboard to make sure we haven't lost any steps along the way." Aiming for an optimal length of 22 to 29 minutes, Rogers found the narration ran 39 minutes, so he had to cut 15 minutes.

SCORING THE MUSIC

Next, Grammy Award-winning musician Mark Isham, who already had the script, was sent the final narration. Mark Sottnick and Johnson visited him while he was playing in New Haven to discuss the project. Notes Rogers, "We tend to be as unobtrusive with musicians as we are with artists. It's their job. We just make sure they have an understanding of the emotional content of what we're trying to create. It's easy in Mark's case because he's done a number of videos for us, and he's also a film scorer." Then Isham recorded his original music on DAT in a Los Angeles studio. For many who have heard the music, it is as haunting and as vaguely Oriental as Johnson's illustrations.

Shooting in HD Video Here an artist works on a high-definition computer system at Rebo Studio in New York City. The artist programs a series of moves at the animation stand then executes the moves in the next room. The monitor shows the images being filmed.

FUSING VOICE, MUSIC

Back at ServiSound, Rogers fuses the music with the voice. "With AMS we're able to lay the voice out the way we want it, put the music against it, shuffle it around a little bit and adjust the structure," explains Rogers. "It's so sophisticated that I can take a little phrase of voice and change it a half a second against the music." The DAT tape was then transcribed onto D2 tape, which is a digital recording system used for the video format.

Once the soundtrack was complete, Rogers played it for Johnson. At this point, the artist has the option of changing some of the images, but Johnson felt the sound and narration supported his vision, although some of the illustrations had to be eliminated where dialogue had been edited out. Next, Rogers sat down with Johnson's drawings, the soundtrack, a copy of the script and a stopwatch to plan camera moves.

SHOOTING IN HD VIDEO

The next step in the process is shooting the images. This can be an exciting but frustrating time for any artist. "It's a nightmare to see my work up on a huge screen for about 15 minutes while Craig shoots it. At that point it's his vision."

"The Boy Who Drew Cats" was the first video Rabbit Ears produced using high definition technology. Referred to as HD in this country, it is a significant advance in television production. In contrast with conventional television technology that has 525 lines, HD has 1,125, or more than double the resolution, which is the equivalent of 35mm projection. Although it is in limited use in Japan and it is being experimented with in the U.S., it is very expensive.

"We decided to go to HD to show off the artwork wonderfully," says Sottnick. "Why not prepare for the future, since we're able to sell our HD rights in Japan without a loss in costs through a jointly owned company called Rabbit Ears International. We don't make any money on HD here, but we don't lose any either."

Comments Rogers, "Shooting David's illustrations in HD was a perfect first choice for us on a number of levels. The line quality of David's drawings and the texture of his paper are both very, very fine, and the subtleties of his colors are exquisite. HD's color reproduction is vastly superior to regular TV."

Reserving several consecutive days editing time at Rebo Studio, a New York City HD operation, Rogers works with a traditional animation stand: "A metal plate sits on a large stand with an overhead camera shooting down on it. The stand moves around and the camera zooms in on the art." At Rabbit Ears' request, Rebo enlarged its stand to accommodate the larger-than-normal artwork.

In an adjoining cubicle, Rogers programs the moves on a computer. The stand moves in what is called north, south, east, west and rotation, allowing Rogers to plot movements with a joystick. The computer can be programmed to make a movement in a certain amount

of time. It can also repeat moves, and the camera lens can make the images larger and smaller. "While I'm shooting the art," says Rogers, "I sit here with a tape recorder and play the audio track back as a reference to help work out the timing. I have already sort of programmed my script, so I just recheck the time against the backup tape."

EDITING

After shooting two tapes so he can dissolve the images into one another—thereby creating the illusion of greater animation—Rogers goes into a darkened editing suite and melds the two sets of images together with the audio track.

"The video switcher does the dissolves between the images; it makes the physical transitions from one piece of film to the next," explains Rogers. "So during the editing you've got to determine down to 1/30 of a second where one picture starts and another stops and how long a dissolve will be. Then what's called an editor runs the videotape machines. All the tapes have a timecode so you can stop at a particular frame—there are individual frames in videotape just as there are in film—and all the frames have numbers. The switcher then talks to all the machines using the timecode. That's what you use to line up all the images so you can make them all work at exactly the same time."

In an adjacent room the final video is recorded on 1-inch tape using HD reel-to-reel recorders, each worth $350,000. "Since HD is also digital, we stay in a digital realm throughout the entire production process. That gives us super high quality," notes Rogers.

3 As he draws, Johnson erases frequently with a Staedtler Mars white plastic eraser. "I do a lot of erasing, going back and forth between the pencil and the eraser until I get a tight pencil rendering," he comments.

4 As did the old masters, Johnson relies especially upon weight of line to establish volume and dimension. His sharp pencil point at times is reminiscent of a silver point line. *Tip: Silverpoint is a method of drawing with a sharpened rod of silver. The metal leaves a gray line that becomes darker and warmer with age.*

5 Johnson does his final inking with a Uniball pen, which he prefers because of the ballpoint's continuous flow of ink. Though he follows his tight pencil line closely, he occasionally throws in a few additional strokes. "I want to have a little spontaneity in the hair, to add something that's characteristic," he notes.

6 While inking, Johnson tries to keep the same weight in his lines, which are modulated to suggest depth and dimension. He is helped in this modulation process by the d'Arches 140 lb. cold press watercolor paper he uses.

7 Johnson sprays the 8 x 10-inch sheet of paper with water applied with an airbrush. (He uses two Iwata models, HP-C and HP-BE2 with liquid CO^2 instead of an air compressor.) "I try to get it damp but not dripping," he states. Then he wipes off any extra water with paper toweling.

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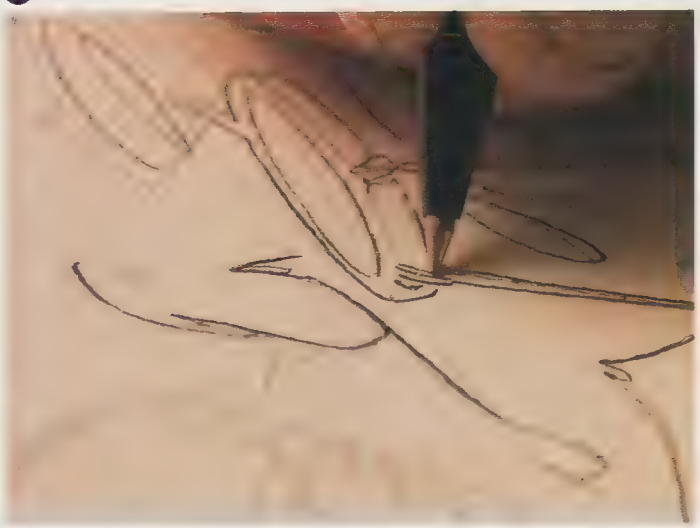

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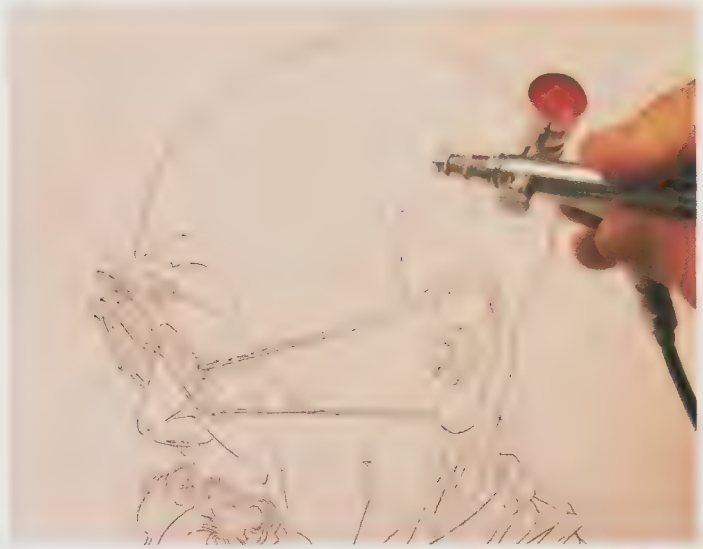

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the pencil lines ❺. "I want the drawing to be simple so I adhere pretty much to what I've drawn," he notes. "Yet there are places where I really try and do shapes like in the glasses. I also try to be a little original in the hair."

Reflecting a moment, Johnson notes, "I always get feedback on my more successful drawings that less is better—which is easier, too," he adds with a smile.

As he is inking, Johnson studies the line and attempts to keep the same weight as his pencil. He feels the paper he uses also helps him modulate his lines ❻. "I used to work on very smooth Bristol board and it was either on or off. This kind of paper and pen combination works really well," he notes.

Johnson does credit Steven Heller, senior art director at *The New York Times*, with helping him perfect his distinctive drawing style, which is obsessive and curiously economical at the same time. "Steve helped focus me—I've always needed managing. He said, 'Don't do crosshatching; stay with the line.'" Ruminating on his attraction to line, Johnson observes, "It just seems to make sense. I can't figure it out. To do anything else would not be natural."

AIRBRUSHED COLOR

After he finished inking the entire drawing, Johnson carefully erased the pencil lines. Then he wet the entire sheet of paper ❼. The d'Arches paper is especially absorbant. He buys it in bulk, 25 sheets at a time. *Tip: This kind of bulk purchase is called a quire. The 25 sheets are actually 1/20 of a ream.* The artist cuts the large sheets into 8 x 10-inch rectangles with a table saw. "I use a thick-toothed blade that rips through the paper and makes ugly edges," he states. "But if I don't use it, the paper starts to burn, and it really smells because of the animal glue in it."

Johnson prefers to use the airbrush because he doesn't feel as comfortable with a brush and because the airbrush keeps his color pure. "If you use a regular brush, it gets dirty. And overspraying with an airbrush keeps the thing even." Since completing this project, Johnson has quit wetting the paper first because the paper became too saturated and he couldn't remove color. "I'm generally trying to use less color, which seems more successful, so that when I start painting it becomes modeled and dimensional."

The first color Johnson applied to his paper was a light sepia. He prefers Winsor & Newton watercolor pigments in tubes. In order to load the color into the airbrush, he first squeezes some pigment into a bottle, adds water and shakes to make sure it is dissolved. Then he loads it into the airbrush cup.

Next, he cut out a simple mask in a shape similar to the priest's head ❽. With the mask in his left hand, he airbrushed another layer of the sepia on the outer edge of the head ❾. "Holding the mask is nice because I'm able to give some definition to the shapes, which works well with the line," notes Johnson.

"Although the airbrush is frequently used to make round shapes, I like to make them flat. I've found the more dimensional the painting gets, the more it detracts from the line."

After adding several areas of denser color over the eyes, he added both tight and broad strokes with the airbrush ❿. Then he laid in broader areas of color with a wider airbrush spray ⓫.

The color palette became extremely important because the illustrations would be transferred to video. Notes Johnson, "I did a lot of experimenting with color when I did 'Thumbelina.' I found the blues don't work very well. They don't interact with the paper the same way and they're hard to control, so I made

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8 Johnson cuts a mask out of the same 140 lb. watercolor paper. He prefers loose paper masks to friskets because they allow him to keep the coloring process more spontaneous.

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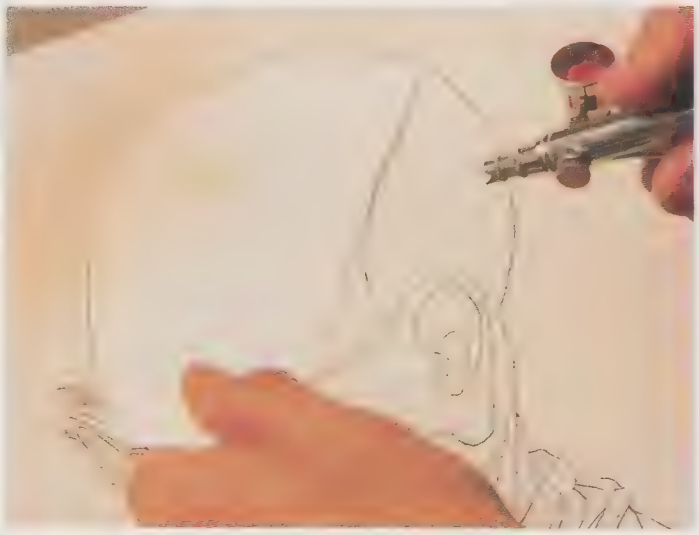
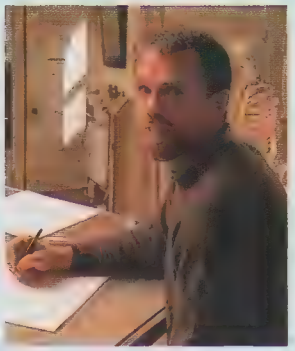


9 Then Johnson gives the background another layer of sepia, using the mask to make the line and the color work together. "I try to make shapes flat rather than molded," he observes.

❿

10 After adding selected spots of more intense color over the eyes, Johnson goes in with the Iwata HP-C airbrush to reinforce the line in the eyeglasses. The mask does double-duty for Johnson: He also uses it to test out the color in his airbrush.

A MASTER OF LINE



I try to listen to my hand," says artist David Johnson, whose elegant pen-and-ink portraits for *The New York Times Book Review* have delighted readers since his work first appeared there in the mid-1970s. "My brain usually tries to tell my hand what to do, but sometimes my hand has a good idea all its own. I try to recognize that and not be like a mean teacher and say, 'Oh, shut up, and just do what you're told.' Rather, I try to say, 'Yeah, that's a good idea.'"

Fortunately, David Johnson hasn't had any mean teachers or mentors. All the major influences on his career—Bernice Hall, his high school art teacher, Steven Heller, senior art director of *The New York Times*, and his grandfather—have encouraged and guided him as an artist.

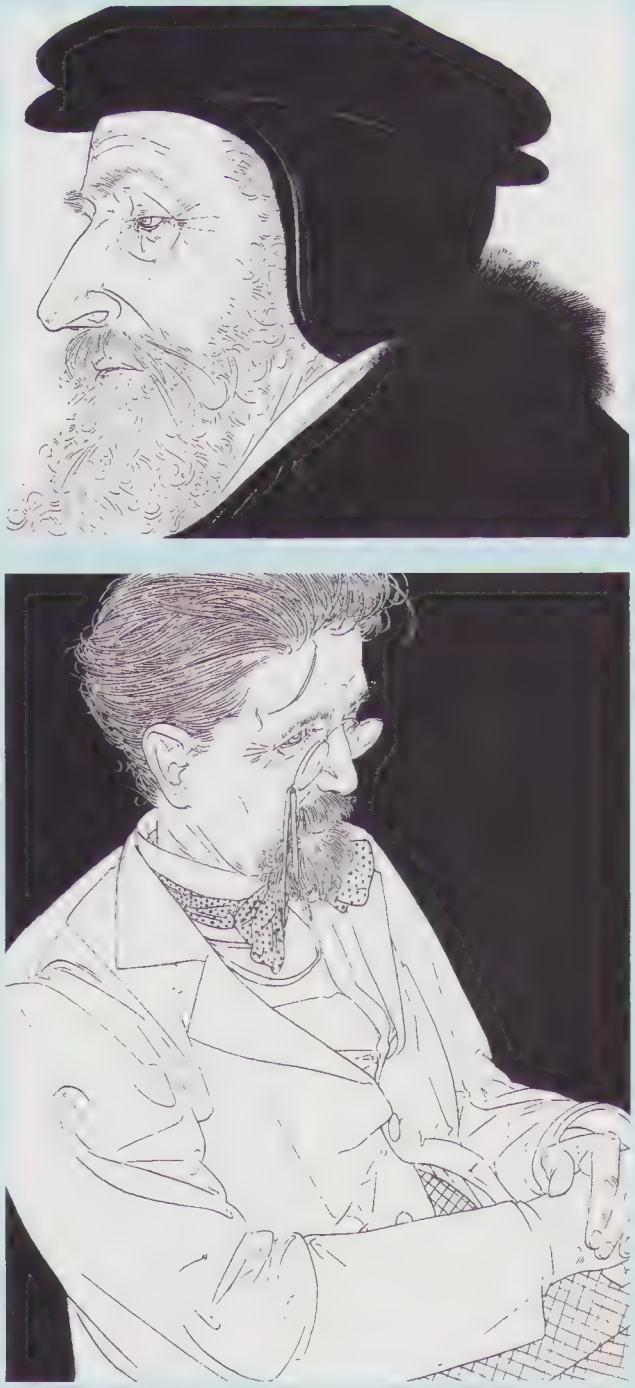
"Mrs. Hall taught art, but she really taught me how to be an artist," states Johnson, who dedicated the book version of "The Boy Who Drew Cats" to her. Heller encouraged him to stick with what he did best and urged him to do portraits. "'There are enough crosshatching artists,'" Steve told me. "'Stay with the line.'" Johnson's grandfather, a publisher of an export trade newsletter (who printed the program for the famous 1913 Armory Show which introduced modern art to the U.S.), offered Johnson two pieces of advice when he was in his early 20s: "First, you're going to have to work harder. Second, you have to have patience."

Observes Johnson, "It's hard to have patience, but it's very important for illustrators. It's the one piece of advice I pass on. Either you can burn out from not getting enough work, or you burn out from doing too much work in a short period of time."

Largely self-taught, Johnson describes his high school experience as being "a big frog in a small pond." As a child he had plenty of attention because of his drawing and was eventually accepted into Cooper Union, Pratt and the Rhode Island School of Design. In 1969, he attended Cooper Union for a week and decided to drop out for a year. He never went back. Instead, he began freelancing for *National Lampoon* and CBS Records. His break came five years later when Heller recognized the eloquence in his line and began coaching him. Admits Johnson, "I didn't start identifying as an artist until I was 30 or so." He now counts *Time*, *Harper's* and *The Progressive* among his clients.

A lover of gardening, wordplays and wit, Johnson is an avid reader and sails competitively in the Long Island Sound. He also paints oils—both large semi-abstract and small Klee-like canvases—which he occasionally exhibits.

Though he thinks "underutilized potential" may be a source of angst in his life and he would consider being a photographer or abstract artist if he could start all over again, Johnson sums up his life: "I feel very lucky at 41 to be shifting up a gear in my career. I think I've learned to draw better in the last few years. I can see better. I hope to live to at least 80, 90, 100 or more."



Linear Man Black-and-white line portraits which appear in such publications as *The New York Times* have become illustrator David Johnson's specialty. In these drawings he juxtaposes an economy of line in the facial characteristics with a baroque quality to such areas as the hair and beards.

Continued from page 47

a lot of mistakes. And there's really no good green pigment. For 'The Boy Who Drew Cats' I was able to use a more resolved color style: lots of ochres [sepia, cadmium yellow, carthame pink and cadmium red]. The yellows and reds are pretty easy to deal with, and they give the drawings a sepia-ish kind of archaic look that I wanted."

At times, Johnson finds after he has applied an area of color, he isn't happy with it. To correct the problem, he wet a two-inch brush with water and evened out the color ⓬.

FINISHING TOUCHES

After applying a few more airbrush washes, Johnson began to correct color problems and add details with a lead pencil and various brands of water-soluble colored pencils ⓭, ⓮. Later he will use water and a brush to blend the color into the background.

Johnson prefers to work with the water-soluble pencils because the color spreads when it hits the wet paper. "Then I take a slightly moist paper towel and smudge it. Sometimes I also darken areas with black lead. I use anything that will work. A couple of the lighter colors are good for blending. If I find something better, I'll use that—maybe even chamomile tea," he says, pointing to the mug beside him. Noting that he prefers to work with primary colors, Johnson observes, "You can use primaries to make all the other colors, but you can't make primaries from non-primary colors."

Johnson uses two methods to create whites: He scratches out the background color with an X-Acto knife, or occasionally, when a larger area of white is needed, he goes in with a white watercolor pencil ⓯, ⓰

He has also had success with bleaching and with airbrushing white. "I try not to plan at all," he relates. "Yet, if I'm doing one picture after another, I end up planning. The pictures do have

⓫

⓬

⓭

11 Using the Iwata HP-BE2, a larger airbrush, he applies some broad strokes of color to the background. Though watercolor wasn't totally new to Johnson, he admits, "I made up this style of working with watercolor for the videos. It's the first time I did a lot of it in the same style."

12 If areas of airbrushed color become too splotchy, Johnson wets the paper with a damp brush and evens out the color.

13 Using various brands of water-soluable pencils—Caran D'Ache, Staedtler, Supracolor—he adds color to the area surrounding the head, which he will later blend into the background.

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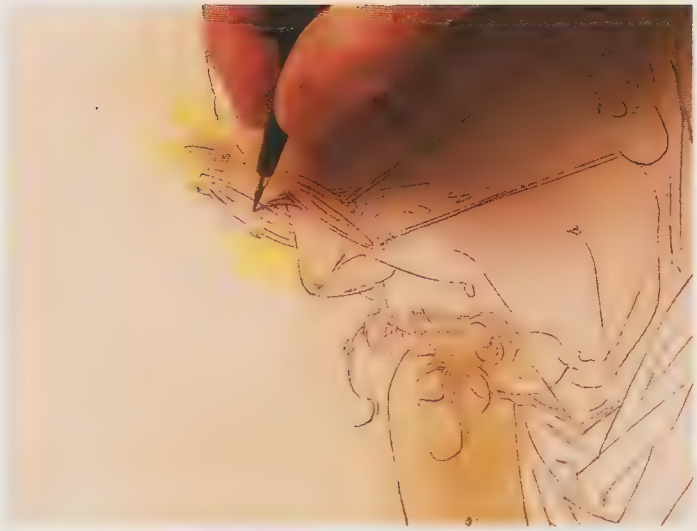

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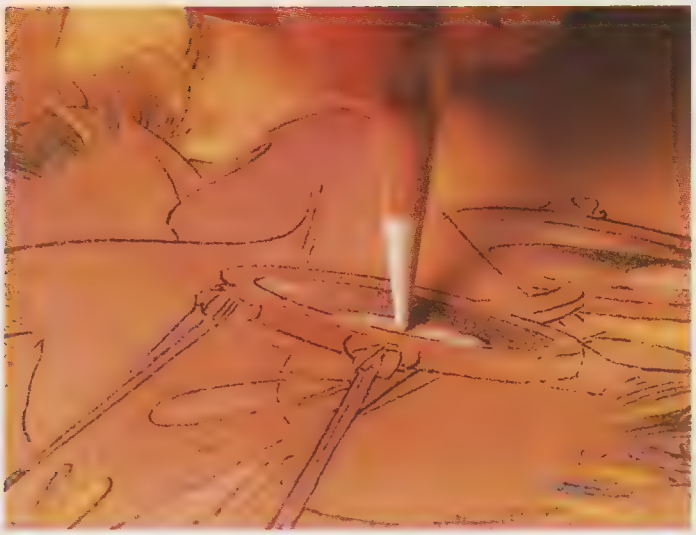


14 Next, Johnson uses his lead pencil to add gray tone to the glass lenses. Later, he will also add a similar tone to the area surrounding the mustache. The pencil acts as a neutral tone to enhance dimension. He also uses the pencil to correct and darken his lines because the Uniball would darken them too much.

15 To add white highlights, Johnson goes in with an X-Acto knife fitted with a No. 16 blade and scratches away the color until he reveals the white of the paper. This is especially helpful for thin lines like those on the mustache and eyebrows.

16 Another method Johnson uses to reestablish white areas is to use white colored pencil. Here he uses it to create a highlight on the glass lenses. The contrast of the white pencil and dark lead will draw attention to the area. He also uses white on the priest's collar, on the bald head and in the background.

HEY DISNEY!

Quality feeds the soul. That's what makes life worthwhile," says Mark Sottnick, founder with his wife Doris Wilhousky of Rabbit Ears Productions, Inc. Using that basic philosophy since 1985 when they began operations, Sottnick and Wilhousky have put together teams of top actors, illustrators and musicians to produce more than 40 videos, cassettes and compact discs for children—and have won dozens of awards in the process, including two Grammys and nine Grammy nominations. Using the highest-quality, most advanced recording and animating techniques in the business has earned them a unique place in the field of children's entertainment.

No wonder actors as diverse as Jack Nicholson, Glenn Close, Danny Glover, Robin Williams, Cher, Sir John Gielgud and Jodie Foster have contributed to their Storybook Classics series. Or such musicians as Bobby McFerrin, Taj Mahal, Ry Cooder, Dr. John, Ladysmith Black Mambazo and Leo Kottke. Or such artists as Tim Raglin, Henrik Drescher, Robert Van Nutt and Lori Lohstoeter.

But Sottnick, a former high school science teacher from Philadelphia who did graduate work at Yale in film, likes to think big. It is that kind of brain cell work that enabled him to snare Meryl Streep to read and George Winston to write music for "The Velveteen Rabbit," the company's first video. "We're trying to raise up the standard in family entertainment," states Sottnick. "In some ways we think we've done that already by using good illustrators, top actors and great musicians. But we're always trying to do it better yet."

While Sottnick says Rabbit Ears may be the only company in America that exports animation to Japan through its jointly owned company, Rabbit Ears International, he would like to see Rabbit Ears do animation for TV in this country, feature-length animation for Hollywood or even live-action programs. With a track record as rich as Rabbit Ears', no telling what we may see next. Move over Disney!

to be related a little bit. The most important thing to plan is any white area because you can't really go back in and lighten things effectively. You can spray-bleach them. On 'Thumbelina' I did a lot of spraying of white paint. Using white over another color gave it a different look. It's my favorite technique."

After carefully blending the watercolor pencil into the wet washes, Johnson added other accent colors to the art, in this case pink, yellow and blue ⓱.

Since Johnson was working to please himself as well as his client, he ended up doing about 300 or 400 drawings altogether. "But not all of them are finished," he adds, as he displays a box of outtakes. "Sometimes a piece gets overworked. Then I trace over it and start again."

FINAL TAKES

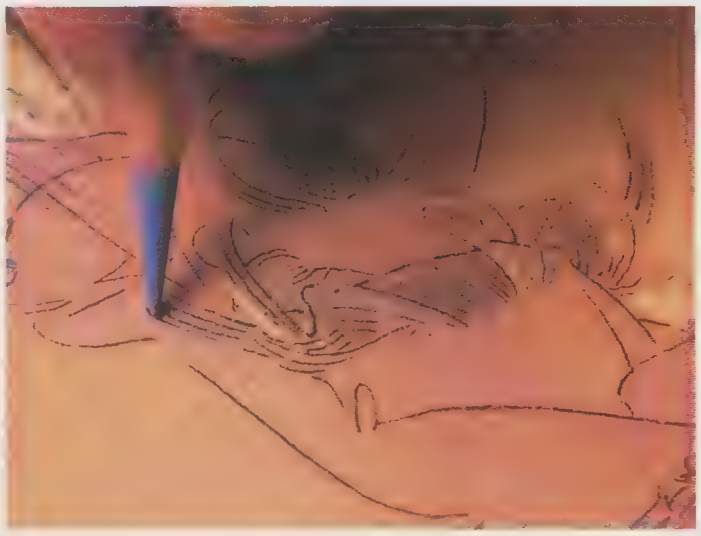
In addition to the drawing, Johnson also did the calligraphy that appears in the title sequence of the video. He enjoys lettering and type, and for this project, worked until he created letterforms that suited him ⓲.

While Johnson has enjoyed the change in directions the Rabbit Ears projects have offered him, he suspects he will be burnt out when he finishes his third project—"The Bremen Town Musicians"—due for completion in December 1992.

Yet, the excitement is still there. "I'm trying to push the medium as much as I can because I think it hasn't realized a fraction of its potential. Some of the videos are very sophisticated, but there's a wide scope in the medium. If high-definition dissolve animation does well, we'll all do better."

But Johnson seems to be doing just fine already. One can only speculate about how proud art teacher Bernice Hall would be if she knew how Johnson has interpreted the story she gave him 20 years ago. ■

Susan E. Davis is senior writer for Step-by-Step Graphics.



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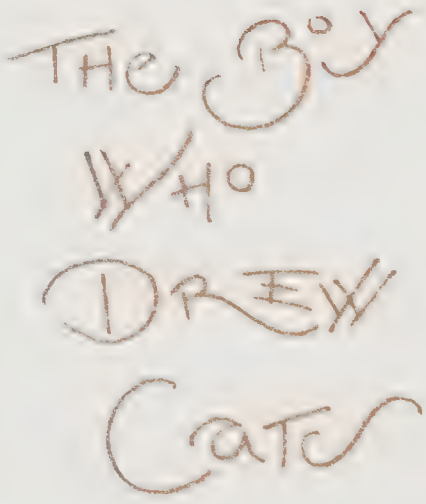

17 Johnson adds tiny touches of color—pink, yellow and blue—which he feels create vibrancy in the finished work. While the pink and yellow blend with the other colors (top), the blue, which he applies in solid strokes in the priest's moustache, acts as a contrasting color (bottom).

18 Johnson did the handlettering for the title sequence of the video with a brush and a sepia palette similar to the one he used in the drawings. The letterforms are not based on any existing alphabet.

Painting Digital Portraits

Learn how Mark Jasin combines FreeHand, TextureSynth and Photoshop to create an electronic portrait of talk show host Oprah Winfrey.

By Janet Ashford

Portraiture with Color and Shape Starting with a conventional black-and-white publicity photo, Mark Jasin used FreeHand, TextureSynth and Photoshop to develop a colorful and complex electronic portrait filled with forceful angles and background shapes, multiple textures and bright details.

There is a strong ethical code among newspeople not to manipulate news photos. It distorts reality. But with the transition from conventional to digital production, editorial photography no longer passes from hand to hand. It is sent electronically, often via satellite, directly to the Macintosh for image-editing, often making the very first view of a photo on-screen. For news organizations, this "can of worms" called image-editing must remain limited to color correction and adjustment of contrast and detail.

But for illustrators like Los Angeles-based Mark Jasin, computer-based photo manipulation has opened up a whole new style of photo illustration, one that allows them to move beyond the raw material of the photo into the area of art and editorial comment. In fact, it is Jasin's view that this new movement could have an important impact on the "subconscious of our culture."

As you may have already guessed, Jasin's colorful, emotional and painterly editorial portraits often begin with humdrum reality. But by converting the scanned original image to a coarse bitmap and applying new colors and textures, he can quickly produce a sense of illustrative richness. Jasin, who worked for the *Orange County Register* before becoming a freelance illustrator, recently applied his skills to a digital portrait of talk show host Oprah Winfrey, for the cover of the *Los Angeles Times'* own *TV Times* magazine. Winfrey is a strong, dynamic and multi-faceted woman, and Carol Kaufman, the *TV Times* art director, wanted Jasin to emphasize those aspects of Winfrey's personality in the portrait.

SCANNING THE PHOTO

The *Times* library supplied Jasin with a batch of publicity photos from Winfrey's file. He chose an 8 x 10-inch, glossy black-and-white and used his Microtek MSF 600ZX to scan it as a 300 dpi grayscale TIFF at 200 percent, in order to get enough detail for the touch-up he planned to do ❶. The *Times* had asked Jasin to provide the final art in the form of a finished Photoshop file for color separation, so with this in mind he planned the size and final resolution following the *TV Times* trim size of 8⅝ x 10⅞-inches with a ¼-inch bleed. He knew that the image would be printed with a 133-line screen, so at first he planned a final resolution of 268, roughly double the line-screen.

EDITING THE PHOTO

Jasin's first task was to create a new Photoshop file in the image size he needed. Then he decided which portion of the scanned photo to use and resized the image to fit the *TV Times* format by entering a new width in the Image Size dialog box. He then copied and pasted the photo within the format, leaving 2¼-inches free at the top for the nameplate. Once the image was in position, Jasin used the Levels dialog box to improve its contrast ❷.

Next, Jasin used the pen tool, with a two-pixel feather applied, to click point-by-point along the hair and around the adjacent background to select the background and delete it from the image ❸. Using a feather with the tool produced a smooth, soft edge on the figure silhouette.

Using white paint and the airbrush in several sizes, the artist painted out details in the face and added highlight details to the hair. He wanted the face to look clear and dramatic, defined mainly by the strong con-

❶

1 Illustrator Mark Jasin chose this black-and-white publicity photo of Oprah Winfrey for the *TV Times* cover from among several shots supplied by Winfrey to the *Los Angeles Times* library. The art director wanted a final image that would look strong and not "too feminine." Jasin chose this shot for its straightforward gaze, dynamic angles and interesting jacket pattern.

2 The photo of Winfrey was shot in a horizontal format, but the *TV Times* is vertical, so after positioning the scanned image in the window, a band of white space appears at the top. Jasin adjusted contrast using the Levels dialog box to reduce the gray values in the mid-tone range by sliding both the central, gray triangle and the white triangle on the Input Levels scale to the left. The Levels controls are shown here in their default settings.

3 Jasin used Photoshop's pen tool to silhouette Winfrey's head by placing points along the border between her hair and the background and then around the background to form a large closed path. Jasin clicked inside the path to convert it to a selection outline, then chose Feather from the Select menu to apply a feathered edge of two pixels. The feathering or blurring of the image spreads to a depth of two pixels on both sides of the selection outline, softening the edge of the silhouette.

4 The photo scan has now been sized, cropped, positioned, silhouetted, corrected for contrast and airbrushed to improve details. The Airbrush Tool dialog box allows control of the size and shape of the brush and the way in which the color, in this case, white, is applied.

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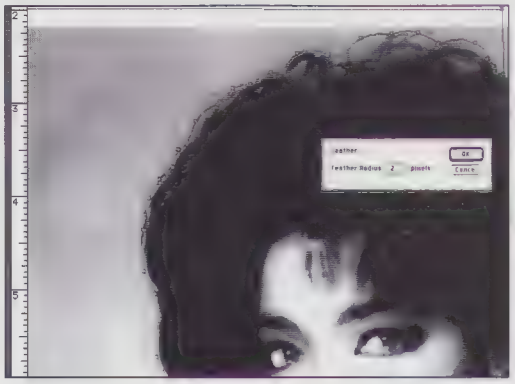

❹

tours of the eyes, nose and mouth. He also wanted more texture and light in the dark mass of the hair. As he planned to later convert the grayscale image to a black-and-white bitmapped image with a distinctly pixellated look, he worked back and forth between two modes: First, by editing in grayscale, then converting to bitmap to check the image, and finally converting back to grayscale as needed to make further changes until the editing was done ❹. *Tip: Most editing changes cannot be made in bitmap mode.*

CONVERTING TO BITMAP

Once the grayscale editing was complete, Jasin used the Mode menu to convert the image to bitmap mode, sampling the image down to 75 dpi to produce the pixelly look he wanted. He saved a copy of this low-res version as a TIFF for later use as a template in FreeHand, then used the Image Size dialog box to double the resolution to 150 dpi to produce a medium-resolution version. The two versions look identical ❺.

At this point the *Times* informed Jasin that it preferred to work with a 4 x 5 transparency of the final image, rather than the actual Photoshop files. So Jasin decided to use a final resolution of 300 dpi. In order to keep the rough-looking bitmap pattern identical as he moved from low resolution to medium and later on to high, he knew he had to increase the image resolution by two each time. By doubling the resolution exactly, each existing pixel would be represented by a larger square made up of four or 16 adjacent pixels, so that the look of the bitmap would not change. With 300 dpi as the final resolution, Jasin then used 150 dpi for his medium-res work and 75 for the low-res version. *Tip: To make absolutely certain that a bitmap pattern in a grayscale, RGB or CMYK file remains the same as resolution is doubled or halved, be sure to check*

5

5 Jasin produced a low-res, 75 dpi version of the image in order to get the pointillist texture he wanted, then doubled the resolution to 150 so that the color and texture elements he planned to add later would have a finer grain. He doubled the resolution so the before and after versions of the bitmaps would look identical, as each single pixel in the low-res version is represented by a square clump of four pixels in the medium-res version (inset).

6 The low-res bitmap of Winfrey was placed in FreeHand and used as a guide for creating a color study of background shapes. Jasin first drew a series of parallel red lines to divide the composition into polygonal shapes (below left). He followed the guides to draw shapes filled with color. Each shape was drawn on top of the bitmap, as with the mouth, for example (below center), then sent behind the TIFF where the shapes show through the transparent areas of the bitmap image (below right). The red guidelines were deleted.

6

"nearest neighbor" as the Interpolation method in the General Preferences dialog box.

CREATING COLOR

Before going further with the bitmapped image, the artist switched to FreeHand to plan his portrait's composition. *Tip: The drawing tools available in PostScript illustration programs are faster and more precise than those available in Photoshop.* He opened FreeHand, used the Place command to import a 75 dpi TIFF version of the Winfrey image, then used it as a guide for drawing color-filled shapes. Because the white areas of the bitmap are transparent, the colored shapes placed behind it show through.

Opening a template document that includes a prepared palette of primary and secondary colors is Jasin's typical habit when starting work in FreeHand. For the Winfrey illustration, though, he added about 10 new process colors to the palette—including rich tones of green, purple, brown, blue and red along with highlights in pink, white and yellow 6. Once the study was finished, Jasin used Capture, a screen-capture utility, to copy the screen view of the FreeHand study as a PICT, so that it could be opened in Photoshop for use as a guide. *Tip: Photoshop will open EPS files, but only those created in Illustrator. An alternative to using a screen-capture utility, is to convert FreeHand files to Illustrator format with a program called EPS Exchange.*

CUSTOM TEXTURES

Before beginning work on the final Photoshop image, Jasin used TextureSynth, a texture creation program, to create six textures in six different colors. TextureSynth includes about 40 ready-made textures, all of which can be edited to produce special effects. *Tip: Textures can also be created from scratch using the controls in the Patch window. The window contains controls for two textures, A and B. The size, distortion, inversion, level, contrast, detail, complexity and twist of each texture can be changed, along with the object, highlight and shadow colors. The two can*

be used individually or combined in four different ways, adding to the possibilities. Jasin saved each texture as a 24-bit TIFF at the largest available size, 640 x 640 pixels. He then opened each texture patch in Photoshop, increased the canvas size to the dimensions he needed for the Oprah image, then copied and pasted the patch to fill up the space ❼. *Tip: To eliminate the seams between the patches he used the rubber stamp tool to sample a central portion of each patch and paint with this image along the seam lines.*

THE CALCULATE MENU

Next Jasin blended the red texture he had created in Texture-Synth into a solid orange fill using a black-to-white gradation as a mask. To do this, Jasin opened three files on-screen and then used the Composite command, found under the Image: Calculate submenu. The first of the three files was the red texture, pasted over a copy of the Oprah bitmap file that he had made by

MAKING IMAGES SING WITH COLOR

Common themes in Mark Jasin's work include converting grayscale images to more textured bitmaps, breaking up space in ways that play off of the natural forms of the image, and creating strong color compositions that "make images sing." Jasin, who has a BFA from Arizona State University, likes to begin with a photo image that's fairly simple and uncluttered, then he works with it to produce a sense of depth and texture.

For example, his portrait of Ryan White (below left) began with a fairly conventional photo of the boy whose struggle with and death from AIDS was the subject of much national attention. Through the use of color and composition, Jasin was able to make the portrait of White look very alive and positive, making a strong statement for the poster on which it was used.

The portrait of singer Chaka Khan was one of five images Jasin created for a print ad for Warner Brothers. Here he also started with a black-and-white photo. Then he converted a grayscale scan of the photo to RGB and played with the arbitrary map control to add colors to the image. The effect is particularly striking in the clothing, where dark colors in highlight areas, and light colors in shadow areas give the image the look of solarization.

A portrait of the Irish rock band, U2 (above right), began with a low-resolution (72 dpi) scan of a black-and-white photo, and ended as a kind of Photoshop sampler of effects. Some areas of the image, like the band member on the far right, were resampled to even lower resolutions, to produce a pixellated look. A grainy texture was added to parts of the background by using the Add Noise filter, and the Mosaic filter was applied to noise within the number 2 to produce a grid of colored squares. Then the Motion Blur filter was applied to a rectangular area to the right of the numeral to make it look like it is moving.

Jasin also likes to combine his softly textured bitmaps with the hard-edged shapes created in a PostScript illustration program. In his portrait of Ray Charles (see our cover), he edited photo scans in Photoshop, then imported them as TIFFs into FreeHand. The TIFFs were made transparent so that the white areas became clear. FreeHand's drawing tools were used to add color areas behind the TIFFs that show through and act as tints for the mouth, eyes, skin and so on. Then geometrical elements were drawn and colored to provide a frame for the bitmaps. Jasin created depth in the portrait by having some of the piano keys and gradated squares fall in front and others behind the figure. The result in Jasin's work is a sense of color and movement in which forms, angles and backgrounds intensify the dynamism in in the photographic material.

converting the Oprah bitmap file to RGB and then using Image: Calculate Duplicate. The second was a solid orange fill (also applied over an RGB duplicate of the Oprah bitmap). The third was a white-to-black gradation created with the blend tool. To make each of the three files, he had started with a duplicate of the Oprah bitmap file in order to make sure that each new element was the right size. With the three files open on-screen, he called up the Composite dialog box and assigned the red texture to the foreground layer, the gradation to the mask layer, the orange fill to the background layer, and defined "new" as the destination file ❽. After the composite texture was finished, he applied a diagonal motion blur using the Motion Blur filter. (See opening illustration.)

COMPOSITION CREATION

At this stage, Jasin began the process of alternately adding textures and solid colors to the geometrically shaped areas of the portrait, sometimes obliterating the bitmap image of Oprah, then pasting it back on top of the composite again. He began by opening a copy of the Oprah bitmap, then opened the violet texture, copied and pasted it into the Oprah bitmap file, then pasted the Oprah bitmap back on top of the texture. Again, if he started with a copy of the "Oprah bitmap" file, he could make sure that the file would be the right size and that each time he pasted the bitmap image back into the active file, it would always be positioned right in the same place, exactly in register.

In order to make the bitmap image transparent so that the texture background would show through, Jasin called up the Paste Controls dialog box after pasting in the Oprah bitmap. With the bitmap still selected, he moved the white triangle at the far right of the Floating Selection slider toward the center just a few degrees, which made all the white areas of the bitmap drop out. Throughout the process, Jasin used his 19-inch color monitor to good advantage by keeping a copy of the Oprah bitmap file and his FreeHand-generated Oprah color sample open for reference ❾.

To add a portion of the red graduated texture to the composite image, he used the Composite command by defining the file called "Oprah color ps," (the composite image now containing the violet texture) as the Foreground, defining the red texture as the background, and assigning a new, untitled file as the mask. To create the masking shape, he had opened a copy of Oprah bitmap and used the pen tool to draw the shape with the bitmap image as a guide for position. He had filled the shape with black, selected it, and had

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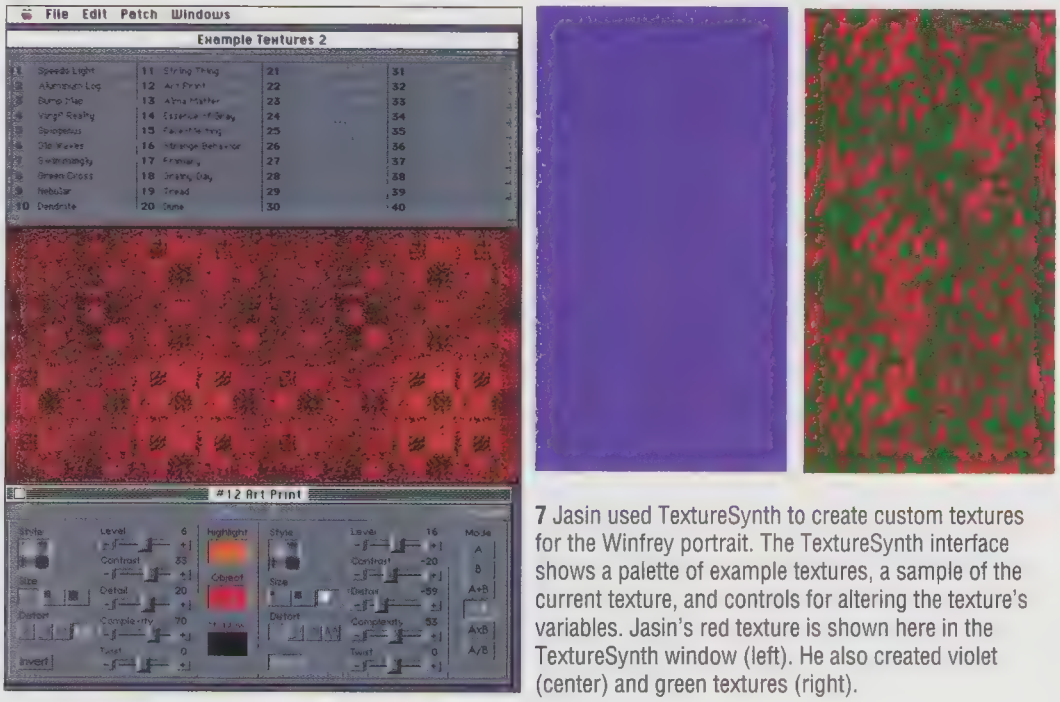

7 Jasin used TextureSynth to create custom textures for the Winfrey portrait. The TextureSynth interface shows a palette of example textures, a sample of the current texture, and controls for altering the texture's variables. Jasin's red texture is shown here in the TextureSynth window (left). He also created violet (center) and green textures (right).

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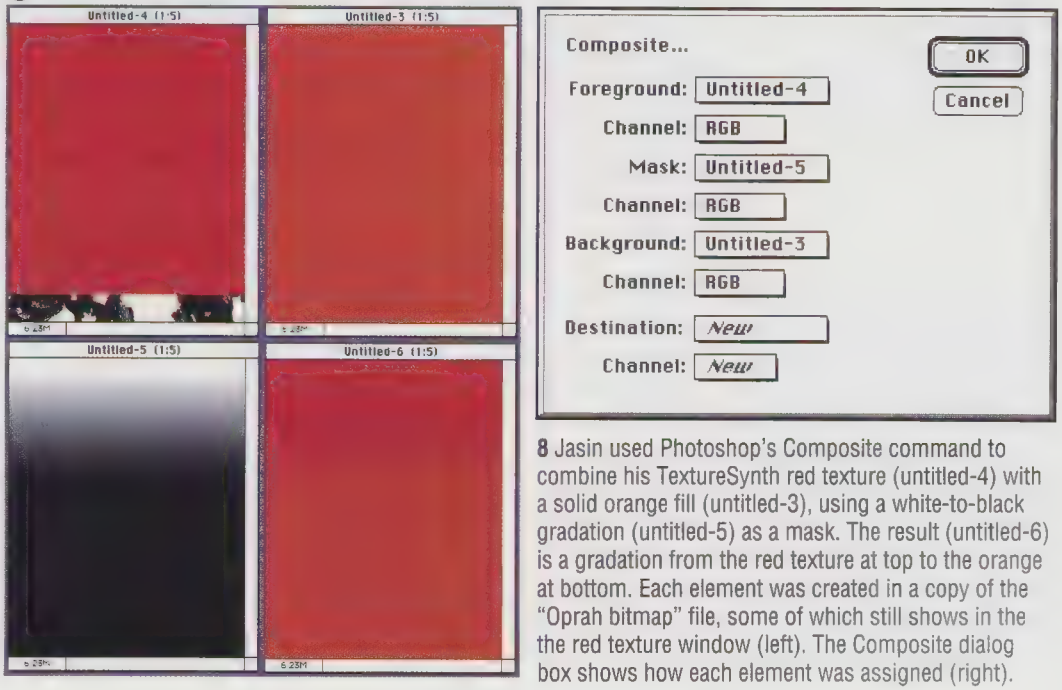

8 Jasin used Photoshop's Composite command to combine his TextureSynth red texture (untitled-4) with a solid orange fill (untitled-3), using a white-to-black gradation (untitled-5) as a mask. The result (untitled-6) is a gradation from the red texture at top to the orange at bottom. Each element was created in a copy of the "Oprah bitmap" file, some of which still shows in the the red texture window (left). The Composite dialog box shows how each element was assigned (right).

9

9 With the "Oprah bitmap" (untitled) and "Oprah color sample" files open for reference, Jasin opened a new copy of "Oprah bitmap" and pasted his purple texture into it, obliterating most of the black-and-white image (above left top). He then pasted a copy of "Oprah bitmap" back into the image, using Paste Controls to make the white areas drop out and become transparent (above left bottom). Moving the white triangle slider a little to the left on the Floating Selection scale made the white areas of the pasted selection drop out so that the texture beneath showed through (above right).

10

10 Jasin used the Composite command again to combine the composite image ("Oprah color ps") with the red gradation texture created in Figure 8 (untitled-6) using a small polygon as a mask. The calculation resulted in the red texture being placed only into the shape defined by the mask (untitled-8).

then chosen Inverse from the Select menu to reverse the selection so everything except the black shape was selected and could be deleted. When the composite result was calculated and written to a new file, the red texture appeared only within the polygon defined in the mask layer ⑩.

The artist continued to add more areas of color and texture, using the FreeHand-generated Oprah color sample file as an on-screen guide and pasting the bitmap back into the composite whenever he needed it ⑪.

ADDING A GRADATION

Once all the color and texture areas were in place, the next step was to add a black-to-blue gradation to the bitmap image of Oprah, in order to add interest and complexity to the illustration. Jasin first converted the bitmap image of Oprah to RGB mode, made a duplicate of it, used Command-A (Select All) to select the entire image, then used the Blend tool to create a blend from black down to deep blue ⑫. Then he pasted the solid black Oprah bitmap back on top of the blend, called up the Paste Controls dialog box, and this time moved the black triangle on the Floating Selection slider a little toward the center so that the black areas of the bitmap image became transparent and showed the blue/black gradation underneath ⑬. Jasin then cut the newly created "Oprah bitmap grad," pasted it into the composite image and used Paste Controls to drop out the white areas. He also set the opacity at 95 percent rather than 100 to make the image a little darker by letting some of the underlying image show through ⑭.

ADDING FINAL DETAILS

At this point Jasin doubled the resolution of the image to 300 in order to get higher resolution on the final details he planned to add later, such as the pink and purple line work on the jacket. To begin the process of putting the finishing touches on the image, he opened a copy of the original bitmap, selected portions of the left and right shoulders, and pasted them back into the final image in order to restore some areas of solid black in the jacket. Because he was selecting only a portion of the bitmap, the pasted selection landed in the center of the image and had to be carefully moved into the correct position by using the mouse to move the selection with the pointer tool, working at the highest magnification of 16 times original size.

In creating a transparent overlay for the bottom left corner of the image, he used the pen tool to draw a triangular shape. In order to gain access to the Paste Controls dialog box, he clicked inside the shape to

11 Using the FreeHand color study as a guide (see Figure 6), the process of adding textures and colors, then pasting the transparent bitmap image back into the composite was continued until all the colored background shapes were in place.

12 To add a gradation to the bitmap image of Winfrey, Jasin used the Blend tool to paint a black-to-blue gradation over the image, starting the blend at the top of Oprah's hair so that all the area above would be black and the color change would occur within the area of the figure.

13 After the "Oprah bitmap" was pasted back on top of the gradation (see Figure 12), Jasin used Paste Controls to drop out the black areas of the image, making them transparent to the gradation. The white areas, however, continued to be opaque, blocking out the gradation.

14 After a gradation was added to the "Oprah bitmap" image, it was pasted into the composite image, using Paste Controls to drop out the white and setting the opacity at 95 percent to make the image a little darker.

select it, copied the selection to the clipboard, and pasted it back on top of itself. With the triangular area still selected he used the Blend tool to fill it with a yellow-to-orange blend, then used the Paste Controls dialog box to specify that the area be rendered at 33 percent opacity.

The last detail was adding spark to the jacket with pink and blue squiggly lines at the leaves' edges. Jasin used the pen tool to draw the squiggles as closed shapes rather than lines and filled each with solid color. Because the shapes were drawn after the image resolution was doubled to 300, the squiggles look much cleaner than the bitmapped shapes around them.

OUTPUT

The *Times* had decided not to attempt a direct color separation from Jasin's Photoshop file, as it did not feel comfortable working with a 25,000K file. Instead, the image was output as a 4 x 5-inch color transparency by GP Color in Hollywood, where a Solitaire film recorder created the image at a resolution of 8,000 dots per horizontal line. Then the transparency was separated conventionally and combined with the *TV Times* nameplate, a banner headline at the top, and finally a kicker that tied this strong and colorful portrait back into the article inside. ■

Janet Ashford is a graphic designer and writer based in Solana Beach, Calif.

Hardware Notes

Los Angeles-based illustrator Mark Jasin uses a Macintosh IIci with 32 mb of RAM and an 80 mb internal hard drive. He has a SuperMac 19-inch, 32-bit color monitor with a video card and a Tokamac 68040 accelerator with a coprocessor. He assigns his Photoshop scratch file to his external hard drive, a 337 mb WrenRunner, and also uses an Ehman's 45 mb removable drive.

Mobile Art on a Grand Scale

How a designer/ illustrator team creates environmental graphics that really move.

By M. William Lutholtz

Stand on any downtown street corner in Indianapolis and you're likely to encounter a huge portrait of the Austrian composer Wolfgang Amadeus Mozart whooshing past on the side of a Metro Transit Company bus. And, if it happens to be night, parts of the bus—Mozart's keyboard, musical notes, and splashy "Spirit of Mozart" type—all glow in the lights of passing cars.

This luminous piece of modern mobile art was conceived by designer Carl W. "Lou" Byer and executed by illustrator David Taylor as a rolling ad for the Indianapolis Fine Arts Society, commemorating the bicentennial of Mozart's death.

The technique of getting the artwork onto the sides of the bus, however, is far from modern. In fact, the method used to transfer the design from the artist's drawing to the side of a massive bus is more than 700 years old and is directly related to the trusty methods used by the great Italian artists of the 13th and 14th centuries who painted frescoes in the Franciscan monasteries.

The story of the rolling bus art began two years ago when Bob Gifford, the local representative for P & C Media, a media sales group that sells transit ads for bus companies in 15 markets nationwide, subleased an office that was shared by Lou Byer's Meridian Design Studio. Byer recalls, "We started doing comp art pieces for Bob to sell ideas to clients. He usually just needed a visual tool to illustrate the concept of painting artwork

on an entire bus. A lot of times, our work was just a rough outline. Then, if the client liked it, we'd continue to work on it and refine it."

Early clients for the painted bus concept included a local hamburger chain and the U.S. Postal Service. The former called for a life-size construction worker who appeared to be clinging to the outside of the bus, eating a hamburger. One U.S. Postal Service bus featured a three-dimensional envelope zooming off the side of the bus, another a larger-than-life American eagle with its wings spread in flight.

Then came the Fine Arts Society. "They had already contacted another artist in town to come up with a design. He'd worked up some rough sketches, based on the idea of making the bus look like an ornate carriage. Then they came to us and asked us to work on it. I came up with a really rough pencil sketch on tracing paper showing an idea for putting Mozart's portrait on the bus. I used some markers to give them an idea of the colors I had in mind, and I only drew one side of the bus, not the roof or the ends." ❶

Martha Vores of the Fine Arts Society looked at Byer's rough sketches and liked what she saw. "She started digging through all

Design Crescendo To commemorate the bicentennial of Mozart's death, the Indianapolis Fine Arts Society commissioned designer Lou Byer and illustrator David Taylor to create a symphony for the eyes. The artisans' work, which is effective both night and day due to a vinyl reflective material, covered the sides and tops of a public transit bus.

Photos by Wilbur Montgomery

❶

❷

1 Because he creates artwork for buses often, Byer drew up a template that provides dimensions and shows him the positions of the windows, doors and so on (top). As he created his initial comp (below), the designer had to follow Metro guidelines on how much glass can be painted over and which windows had to be left completely clear. The client liked this approach and asked Byer to develop it.

2 Using client-provided reference, Byer selected a portrait of Mozart that was both flattering to the composer and workable within his design.

kinds of reference material, bringing me portraits of Mozart to look through," says Byer. "One thing I noticed—no two portraits of Mozart were alike. Some showed him as very young and heroic. Others showed him as homely with a large, hooked nose. I selected a portrait that was somewhat flattering to him and that would also work well on the side of a bus."❷

The black-and-white etching served as a reference for the two portraits Byer would draw for the bus. "One is a very literal portrait, the other is more stylized and contemporary, more modern instead of fully rendered," Byer explains ❸. "This was done to create two different sides of the bus—one representing the Fine Arts Society's older, more traditional supporters, and the other representing the younger, more modern members of the Society."

After his first tracing, Byer did two or three other versions, but finally came back to his first version. "I'd gotten off on the wrong track, but finally came back to where I'd started," he says. He also tried about eight to 10 variations of the portrait to find the best "fit" on the side of the bus.

"There are a lot of restrictions about how much area on the bus could be painted. We had to follow rules about how much glass could be painted over and which windows had to be left completely clear. Also, one side of the bus—the curb side—has folding doors in the middle, while the other side doesn't. The challenge was to find a way to put the portraits on the bus without blocking certain windows—and at the same time, keeping a recognizable portrait."

These secondary portraits and test sketches were drawn with pencil and colored with felt-tip markers ❹. "I used blue, yellows, oranges and reds, thrown across the bus in a casual manner. Mozart's lifestyle appeared that way to me—fairly casual, almost maniacal, definitely not your typical composer. And the bright colors reflect the style of much of his music, cheerful and uplifting."

The "traditional" side of the bus went together quickly, but Byer says the "contemporary" side took longer. "It was rather vague looking. The client liked it and we had an approval, but I still wasn't happy with it myself. I kept trying different combinations of components—the keyboard, the musical notes, and the type—but really without success. Finally, I waited until everyone had left the office one evening, then just sat back in my chair and thought about what I wanted. I went to the copy machine, enlarged a few pieces, and in a few hours, it all

just came together the way I wanted it." ❺

Byer's next step: to prepare final drawings with all the pieces in place and as close to the actual final colors as he could get on artboard. "This was basically a fully comped layout, showing the front, back, top and both sides of the bus, with all the artwork and lettering in place. I don't want to leave too much up in the air for the illustrator to decide. I want to define my design as closely as I can to the way I want the final product to look." ❻

The client had been given opportunities to see the artwork as it was developed, so when the final presentation of the art was made, there were no changes requested.

PAINTING THE BUS

Now the project moved from Byer's hands to those of illustrator David Taylor, who would have the job of actually transferring Byer's concept to the sides of a 38-foot-long Metro bus.

Taylor says that he initially didn't want to get involved in bus painting at all. "I was too busy with my business as a commercial illustrator. But Bob Gifford really wanted me to do it. The first bus, for Ed & Ed's Hamburgers, needed to look very realistic—like a real person hanging onto the bus—and Gifford liked my style."

As a result, Taylor says he has spent every weekend for the past year doing bus art. "It's kind of a challenge. Painting a bus is not your ordinary style of artwork. For one thing, they're very large. When you first start to paint a bus, it feels like the bus just keeps growing larger and larger—you feel like there's no end to it."

Bus art has also become a family project for the Taylor household. David involves his wife, Nancy; their 24-year-old daughter, Julie, who is also a graphic designer; and their two sons, Ben, 19, and Bryan, 13. "It takes three to four weekends to paint one bus," says Taylor. "Multiplied times five people, that's a lot of man-hours. We usually start on a Friday evening, work four or five hours, then do eight-hour days on Saturday and Sunday."

The Metro bus company does the initial work, stripping off the bus's conventional paint job, and coating the vehicle with a fresh base color.

"Metro will coat the bus with any base color we ask for," says Taylor. "Mozart required white, so they sprayed on a base coat with Emron, which is a super-hard paint that is used on aircraft. It's extremely durable and will stand up to the kind of weather that a bus has to go through."

Taylor gets the art layout from Byer, including copies of any reference artwork and typeset copy for any wording that is to appear on the bus.

Now Taylor borrows an idea from the Italian renaissance artists to comp art onto the top of the bus. "After I get all the pieces, I have to make a pattern to use on the top of the bus,

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3 Byer created two completely different designs for the sides of the bus: One, a literal interpretation of his reference art, would represent the Fine Arts Society's older supporters; the more stylized version would represent the younger members of the Society.

4 The designer continued to develop the portraits using pencil and colored markers. He tried to reflect Mozart's unorthodox lifestyle and uplifting music in his color choices. The bright colors would also be more eye-catching on moving vehicles.

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5 Although he had client approval on the art for both sides of the bus, Byer continued to develop the concept for the "contemporary" side. He eventually enlarged individual pieces of his original design and "remixed" them to create this final design.

GLOWING GRAPHICS

Lou Byer's design for the Mozart bus called for several elements of the artwork to be done in the highly reflective Scotchlite material from 3M. Mozart's keyboard, his signature, and the phrase "The Spirit of Mozart" were all to be cut out of Scotchlite and glued into position on the bus to improve the "after dark" attractiveness and visibility of the bus. (See opener.)

To accomplish this, the artwork for these pieces was sent to Preferred Advertising, a local sign and screen printing shop, where Charles Hutchens, Sr., used a Gerber Sign Maker to cut out the vinyl Scotchlite letters.

"We scan the artwork into the Gerber machine, which transfers the information to a cutter. We have two cutters—one that will take 15-inch-wide material, and another that can take 30-inch-wide material," explains Hutchens.

The Scotchlite material isn't inexpensive—Hutchens says that a 15-inch-wide, 10-yards-long roll costs $128.30, while a 30-inch x 50-yard roll costs $1,104. "So we try to 'weed' it as much as possible, taking off as many extraneous areas as we can, and only cutting out the parts that we need."

Fortunately, it is possible to run off a test cutting using ordinary paper instead of the Scotchlite material—a procedure that minimizes wasted material.

Once the images have been cut from the Scotchlite rolls, Hutchens and his crew go to the Metro garage to apply the Scotchlite to the sides of the bus. Finally, a plastic squeegee is used to apply the material and rub all the air bubbles out. The vinyl peel-and-stick material is predicted to have a seven-year lifespan.

since you can't project images onto the top of the bus."

Tip: The same technique was used by the fresco painters to transfer drawings onto large wall and ceiling surfaces. The full-size pattern is called a "cartoon," a term that comes from the Greek word "chartes" for "leaf of paper." The same process was well known to artists such as Giotto di Bondone, Cimabue, and some time later, Michelangelo.

Taylor works with rolls of 40-inch-wide kraft paper, taped to the wall. Images from Byer's art are projected onto the paper, and Taylor traces these in pencil. He usually works in 8 x 10-foot or 10 x 10-foot sections.

Once the art is traced, Taylor lays the kraft paper on the floor of his studio with big sheets of cardboard underneath. Then he uses a special roller device, called a "pounce wheel" to trace over the pattern on the kraft paper. "The pounce wheel is simply a small wheel on the end of a pencil-like device," Taylor explains. "The wheel has needlepoints in it that poke holes through the kraft paper."

When the pounce wheel has traced over all the art lines, Taylor takes the pattern out to the Metro bus garages, where the rest of the art will be done.

"I lay the kraft paper in position on the top of the bus, tape it down, and then take chalk and 'pounce' it over the paper. The chalk dust goes through the holes and transfers the outline of the pattern onto the bus," says Taylor.

To project art onto the sides of the bus, Taylor uses a Vu-Lyte Opaque Projector, which can handle copy up to 8 x 10-inches and can enlarge up to 10 or 15 feet. He moves the projector three or four times for each side of the 38-foot-long bus.

The painted surface of the bus is slick, so Taylor uses either a blue, white or black Stabilo pencil to trace the artwork onto the bus sides. In the case of the Mozart bus, he used a No. 8041 Blue Stabilo.

Taylor says that even though Byer supplies him with a very complete layout, there are still a lot of "fine-tuning judgment calls" that must be made as the drawings are transferred to the bus's surface. "You study it carefully and you can see where moving a piece two inches this way or that way can really make a difference in the final look of the piece," says Taylor.

Once the pattern is completely drawn onto the bus, the painting begins. Taylor uses a variety of paints—everything from Rustoleum spray paint and One-Shot enamel sign painters' paint for covering large surface areas, to Winsor & Newton oil colors for detailed images.

"The ordering of painting depends on the base color of the bus. If the base color is dark, I do the painting from dark to light. In the case of the Mozart bus, however, the base coat was white, so we worked from light to dark. That way, you know you can cover up a mistake with darker colors as you go."

Spray guns are often used to lay down large areas of color. However, in the case of the Mozart bus, no spray guns were used; all the painting was handwork, most done with sign painting and oil painting brushes ❼.

"We use standard oil painting brushes. We don't use sable, but we do use a lot of boar bristle and nylon brushes," he says. "The smallest I've ever used on a bus was a one-inch brush. Most of the time, we use No. 20 or No. 18 sign painting or lettering brushes. They are really soft, with long bristles that will hold a lot of paint."

A NEW LIGHT

When the painting is done, Scotchlite reflective material is applied to certain areas of the artwork to give it a "bright at night" effect. (See the sidebar, "Glowing Graphics.")

"One of the problems with transit advertising is the limited effect you get after dark," says Lou Byer. "So we've incorporated material like Scotchlite to make the artwork stand out more in the evening."

The back of the bus also has a special, lightweight display box to carry lighted advertising. The display box, manufactured by Transglow of Toronto, is only 2½-inches thick. It uses tiny quartz lamps and a highly reflective backdrop within the box to light advertising.

Bus art isn't cheap as an advertising medium. The initial painting and repainting of the Metro bus is approximately $3,000, according to Byer. In most cases, the designer's fees run $3,000 to $5,000, and the illustrator's fees are usually in the $3,000 to $4,000 range. The minimum ad contract is for one year at about $1,200 per month.

Unlike the work of the Italian fresco painters, the bus art has a limited lifespan. Assuming that it survives the wear-and-tear of driving in city traffic, the Mozart bus will decorate the city streets for only three years. Then, at the end of the advertising contract, the artwork will most likely be stripped off and the bus will be repainted in a new incarnation. ■

M. William Lutholtz is an Indianapolis-based freelance writer.

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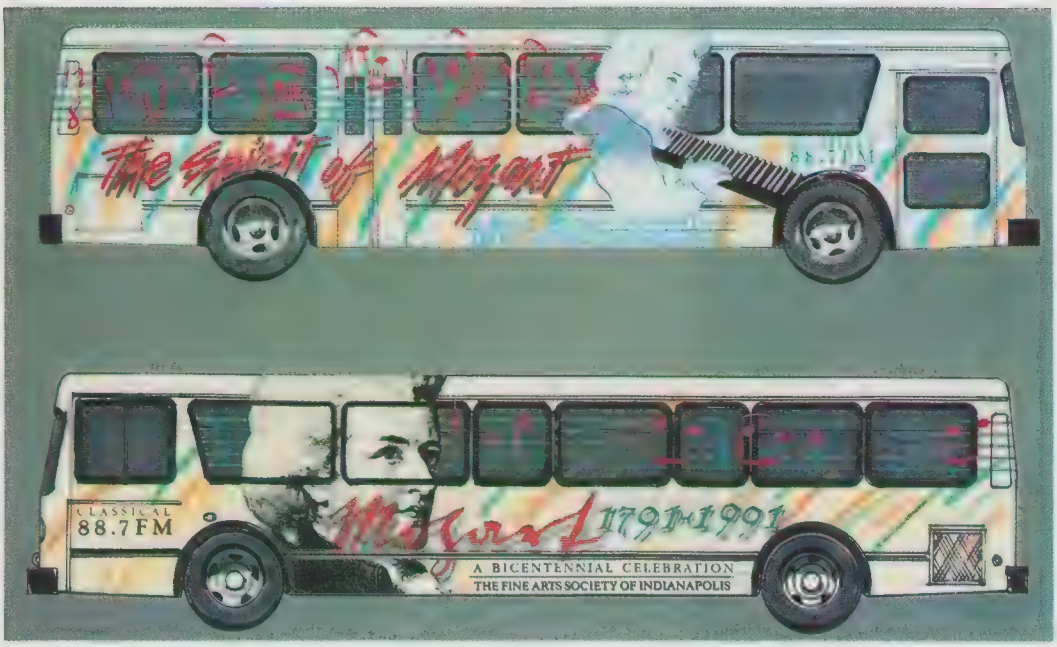

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6 The full comp was done with pencil, pen, markers, and Winsor & Newton gouache. "I worked it up on layout paper first. It's easier to do the work on layout paper and then transfer it onto the art board. I may have five or six individual details worked up on tracing paper. But then I can lay those under the layout paper and trace them," Byer explains.

7 This close-up shot of the painted bus shows artist David Taylor's brushwork. He uses standard boar bristle and nylon painting brushes and No. 18 and 20 sign painting brushes. Because of the large scale of the project, it is important to use a soft brush with long bristles that will hold a lot of paint.

The Allure of Raw Canvas

From on-site research, Dahl Taylor creates an acrylic painting on raw canvas to commemorate a new monument in Washington, D.C.

By Rebecca T. Godwin

For illustrator Dahl Taylor, the critical moment in many of his paintings is knowing when to stop. With his distinctive style, which some art directors have called "finding and losing the image," Taylor's goal is to stop painting in time to allow viewers to bring their own interpretation to the work.

"I try to take a painting to the point where the viewer's eye can complete it, rather than my brush." According to Taylor, while a majority appreciate the style, some have misinterpreted his aim. "I've had people look at a completed painting and say, 'You're not finished yet, are you?'" He grins. "But the way I see it, what I don't paint is at least as important as what I do."

Part of the appeal of Taylor's style is the surface on which he paints: raw canvas. He prefers it over a prepared surface because the tone is ideal as a middle ground, and he also likes the textural look it gives his work. To make it an easier surface to paint on, he usually prepares it with rabbit skin glue. (See the sidebar, "Rabbit Skin Glue.")

Taylor's style evolved from his early fine arts training at The Art Institute of Boston, where he was influenced by teacher Dominic Cretera. On the illustration side, he has been influenced since then by Robert Heindel, Bernie Fuchs and David Grove. Such fine arts painters as Sargent, Matisse and Hopper also played a large part in his stylistic development. "Toulouse-Lautrec is my model for draftsmanship," says Taylor, "and for composition, Andrew Wyeth."

Taylor's style was especially appropriate for a recent large-scale illustration, a 48 x 72-inch acrylic painting depicting the dedication of the National Law Enforcement Officers Memorial. According to Taylor's rep, Vicki Morgan, who procured the assignment, "Dahl's style was ideal for this job. His work is warm, but representational. And because he captures likenesses easily, he can depict a situation as a reportorial illustrator does."

THE ASSIGNMENT

The reportorial aspect of Taylor's style played a major part in his being chosen for the assignment. The National Law Enforcement Officers Memorial Fund wanted a painting that could be issued as a limited edition print commemorating their newly created memorial. Part of the assignment was to attend

NATIONAL LAW ENFORCEMEN
STEVE S ROG
JACQUELYNN K SHEPRILL · GLEN B HEWERDIN
ERNEST H CASSIDY · CO
DAVID J TOLSMA ·
RANDY R LUTZ
WILLIAM P SNIFFEN · WILMER FU
RICHARD H TREMBATH
VANCE COOPER · AL
E HERRMANN · BENEDIC
RICHARD E HART DELAN
SAMUEL J CALLO
CONRAD W SIPPEL · WOPT
GEORGE T RADFORD · ALFRED
DANIEL A JAREMA · FRANK E
JOSEPH WECKESSER · MERVYN A REARI
WILLIAM O'CO
CLARENCE DIETZEL

Painted Memory A montage of images from the dedication of a monument to fallen law officers was created by artist Dahl Taylor. The effect is of a "painted memory" of the event.

the dedication ceremony, held in Judiciary Square in Washington, D.C. By attending, Taylor gained a full sense of the event and the opportunity to obtain photographic references for his initial sketches. "It was important, being there in person," explains Taylor, "because I was able to determine for myself which images would make the best painting."

Taylor notes that while similar projects often have very strict guidelines, this one was wide open. His only mandates were to include President George Bush, keynote speaker for the ceremony, and an assortment of other prominent figures. "And they wanted plenty of uniforms, flags and bunting," recalls Taylor. Beyond that, it was up to him.

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1 Attending the dedication ceremony in Washington, D.C., allowed Taylor to obtain his own photographic references, along with a real sense of the event. Using Minolta 35mm cameras, 28-80 and 75-30 zoom lenses and Kodak 200 ASA slide film, Taylor and his wife covered as wide an area as possible. Her vantage point was a central area near the front, while he took photographs from the elevated media stand.

2 For the dozen images in the painting, Taylor used about twice that many slides as reference, edited down from approximately 500 photographs he and his wife took of the ceremony. In choosing images, he was guided by those which were visually interesting as well as important to the event.

3 After projecting the central image onto his easel, Taylor works other elements in one by one, experimenting with their relationships to each other. Composing image-by-image, he continues the process until the overall rough sketch is completed, expanding the size of his drawing as he goes.

THE PHOTO SHOOT

Though the ceremony was scheduled for a Tuesday, Taylor and his wife arrived early enough to visit the site ahead of time. They attended a parade as well as a reading of the roll call for fallen officers, a ceremony which began at noon on Monday and lasted until the start of the dedication on Tuesday.

Taylor shot many of the images used in the final painting—cameos and vignettes—the day before the event. "It was a good thing, too," he notes, "because Tuesday was a zoo—10,000 participants with another 10,000 in the stands, plus secret service people and reporters."

Taylor and his wife, armed with press passes and 35mm cameras, passed through metal detectors and security checks. While his wife took a central spot near the front, Taylor shot from the elevated media stand ❶. The goal was to cover as wide an area as possible, since moving around was prohibited after the ceremony began. "It really helped, having two cameras," Taylor notes, "because so much went all at once."

The best laid plans can go awry, though, especially where presidential security is involved. At one point, President Bush was to leave the dais, come down to the wall and take a rose offered by two children. Taylor had planned that photograph as the central image for his painting. "I never got the shot," he recalls. "President Bush was completely hidden by the wall of bodies protecting him." Instead, Taylor used the president framed by the National Law Enforcement Association logo as the central image, a choice he feels works better. "I happened to see a photograph later, close to what I'd had in mind, and it wasn't nearly as interesting as I'd envisioned."

Taylor describes the experience as emotionally charged. The ceremony included the placing of the rose, presentation of colors by an honor guard, the singing of the national anthem

Photos by Gary Gold

and "Amazing Grace," a release of doves, and a child taking a rubbing of his father's name. He came away with a sense of the courage, patriotism and dedication of these officers—feelings he wanted to evoke in his work.

CHOOSING THE IMAGES

Taylor and his wife shot more than 500 photographs. "Neither of us are what you'd call professional photographers," he admits. "We had underexposures, blurred shots, a few with telephone wires cutting through the middle." The quality of the photographs is not critical, according to Taylor: For his purposes, content takes precedence over form at this stage. "In taking photos, I look for shapes I might use in composing and illustrating—the images I need—not necessarily what a professional photographer would want."

Taylor prefers natural lighting for photographs, and generally uses a telephoto lens. He finds photographic reference a helpful tool in his work because, like illustration, photography translates three-dimensional reality into two dimensions. And he invariably shoots slide film: "Slides give a luminosity to the colors that's more like real light than prints."

In his studio, Taylor studied the slides using a projector. Within four hours he had rough-edited them to about two dozen, basing his choices on images he considered both important to the event and visually compelling ❷. "Often I'll use a secondary slide which has an alternate position or element that's missing from the primary one." For the dozen images in the painting, Taylor used approximately twice as many photographs as reference. What appears to be a single photographic reference may not be; the grouping in the center bottom, for example, was assembled from several photos.

COMPOSE & SKETCH

For the first sketch, Taylor uses newsprint sketching paper, which he buys in pads of 24 x 36-inch sheets. He prefers a rough finish, because the tooth accepts graphite and chalk well. "Newsprint has a tone which allows me to put in a few white highlights rather than shading so much with a pencil," says Taylor. The tone also mimics the canvas of the finished piece. "It's cheap, too," he says, "but I like it more for its physical properties than its economic virtues."

To set up for sketching, Taylor tapes the newsprint to a half sheet of sheetrock and places it on his easel. The easel is adjustable and easily movable, because he replaced the original casters with heavy-duty office chair casters. Also readily movable are his chair and the old sewing machine stand he uses for a taboret.

Taylor begins the composi-

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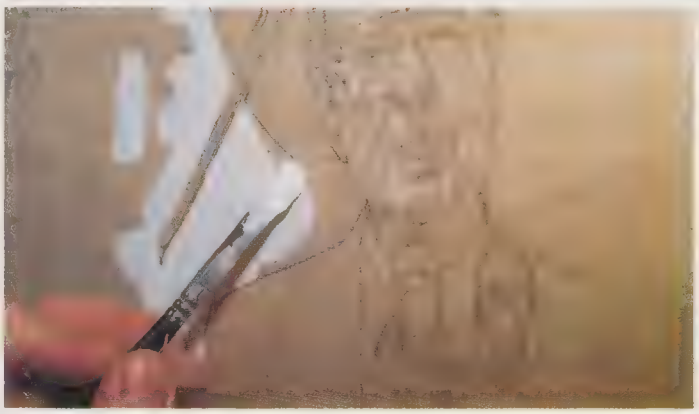

4 Taylor chose some compositional elements because of their significance to the event, such as the inscribed names on the wall. The corners, on the other hand, simply evolved during the composition process, becoming a frame that echoed the formality of the monument and acting as anchors for the montage of images (inset).

5 To transfer the composition to canvas, Taylor tapes his working sketch to the canvas, marks it for registration, then projects the images onto the sketch. As he lines up each slide, he removes the sketch and draws on the canvas from the slide reference. He uses Staedtler mechanical pencils with Eagle Turquoise H or HB leads for drawing on canvas.

6 To establish the value range from the brightest aspect of the painting to the toned ground of the linen, Taylor begins by painting the whites or very lights. Painting in this order helps him decide which parts and values will be left as unpainted canvas in the finished work.

tion process by choosing his central image, which he projects onto the screen created by his easel. In this case, his first projected image, President Bush framed by the logo, goes in the center ❸. Starting with that main image, he works the other elements in one by one, experimenting with their relationships to each other. After choosing the second image, he moves the portable easel around until the second projected image relates well to the first. The third image then must relate well to the first two.

This process continues until the rough sketch is completed, with Taylor continuing to add images and paper as he goes. "I never have worked by making an overall rough sketch," he says. "I compose image-by-image—kind of fly-by-the-seat-of-your-pants composition—letting each image find its own place." During this process, Taylor adjusts the mini-blinds in his studio to create a "twilight," enabling him to see both the paper and the slides.

Other compositional elements either evolved or were chosen for their significance to the event. Taylor knew in advance he would use close-ups of the wall, for example, so that the inscribed names could be seen clearly. The corners, on the other hand, simply evolved. "The monument itself is a park, which features sculptures of lions and cubs at each of its four corners," explains Taylor. "As I composed the sketch, these images became a frame that served a dual purpose—echoing the formality of the monument and acting as anchors for this undulating montage of images fading into each other." ❹

To lay these images down on the newsprint, Taylor employs Staedtler mechanical pencils with Eagle Turquoise leads ranging from an H to a 3B. He also works with white Conté crayons, adding the white for contrast and allowing the tone of the newsprint to create shade. Additionally, the white suggests areas that will be fully completed in the finished painting, in contrast to outlined images.

During sketching, the slide projector stays relatively stationary except for adjusting the height and swiveling from side to side. Taylor moves his chair, taboret and easel forward and back to adjust the size of the projected image.

"One reason I like using a projected image," Taylor says, "is that I can get a nice, fluid drawing line without a lot of rendering. Rather than looking at something alongside of me and building up a structural drawing, I can move my hand in a quick and flowing way. The lines that have that kind of fluidity in the sketch, I try to reproduce as lines on the canvas."

APPROVAL PROCESS

In Taylor's view, the sketch stage is critical in selling the client. "It was especially important on this project," he recalls, "because the guidelines were so open." Taylor credits attending the event and his visual problem-solving ability with the fact that client changes were minor and very specific in nature.

"For the purposes of approval," says Taylor, "I always match sketches to the finished painting size, and send clients the original sketch." He does not generally send color comps. "They're so approximate, I don't think it's worth it," he explains. Taylor makes copies for himself and his agent, and sends an extra along with the original. By keeping his own copy, he can begin work based on the photocopy as soon as he receives approval—especially important when deadlines are tight.

PREPARING THE CANVAS

Taylor's canvas of choice is Fredrix linen, which comes in a roll and is acrylic-primed on one side. Although he paints on the opposite side, he prefers to use a gessoed linen because of its added opacity.

For the current project, Taylor chose a portrait linen, but he sometimes uses a darker linen, such as Fredrix Sarasota. "Linen suits my purposes in two ways," the artist explains. "First, its toned ground is ideal for my style; and second, I like the effect of its texture in the areas I

RABBIT SKIN GLUE

Ever since painters began working on canvas, rabbit skin glue, combined with ground lead white pigment, has been used to prepare a canvas for oils. Dahl Taylor dispenses with the pigment, using the clear rabbit skin glue to prepare the linen of his canvas. "I need a preparation that interferes only minimally with the tone and texture of the linen," he explains. "Rabbit skin glue is ideal. It darkens the color only slightly and provides a ground that is easy to work on." The linen itself creates a handsome background, says Taylor, which has the added bonus of reproducing well.

Taylor generally uses Grumbacher rabbit skin glue, which comes in a crystallized form ❶. Following the directions on the package, Taylor mixes six tablespoons of glue with one quart of cold water. He allows the mixture to soak until it swells, usually around two hours. He then heats it slowly in a double boiler ❷. *Tip: Never boil rabbit skin glue, because boiling weakens the adhesive's structure.*

To apply, Taylor uses a three-inch bristle brush ❸. The mixture appears dark when applied, but is barely perceptible when dry. *Tip: Do not over-apply the mixture. If applied too heavily, the glue returns to its crystalline state when it dries, resulting in a residue of small, shiny flakes on the canvas.* Drying time is generally three to four hours, although if time permits, Taylor prefers to let the canvas dry overnight.

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leave unpainted."

Using heavy-duty Anco stretcher bars, Taylor assembles the frame, stapling the linen to the stretcher bars using ¼-inch heavy duty T50 staples and an Arrow T50 staple gun. Canvas pliers help apply the proper tension. Then Taylor applies rabbit skin glue, which he has prepared in advance. "As rabbit skin glue dries on the canvas, it shrinks," notes Taylor, "and exerts a lot of tension—that's why I use heavy-duty stretcher bars."

SKETCH TRANSFER

When the rabbit skin glue dries, Taylor tapes his working sketch to the canvas, marks where he has taped it for registration and begins projecting images onto the sketch. As he lines up each slide, he removes the sketch and draws on the canvas from the slide reference ❺.

Canvas requires a harder lead than newsprint—Taylor uses an H or HB at this stage, compared to a 3B for the pencil sketch. He notes that he invariably prefers his sketches on newsprint to his drawings on canvas. "Basically, the spontaneity is gone on the canvas, because I have to bear down with the pencil and fight the weave." *Tip: When drawing with pencil on canvas, counteract the "give" of the canvas by placing sheets of cardboard behind the canvas and tucking them into the stretcher bars for increased rigidity.*

PAINTING

For Taylor, shapes, textures and colors take precedence over actual objects in a painting. "Basically, I treat faces the same as I treat cars or buildings," he explains. "It's how the light plays off the forms and affects the local colors." When he paints, his attention focuses on the shape and curve of a paint stroke, a turn of brush, the line of pencil. "These are the things I'm looking for—if I can make the actual strokes look interesting, rather than doing glazes and smoothing and feathering and trying to hide the media." He continues, "I believe more in the truth-in-materials philosophy—if you are using paint, it should look like paint. I'd rather celebrate the stroke than disguise it."

Taylor uses acrylics exclusively, to a great extent because of its quick drying time. "I always seem to be on deadline," he admits. He prefers Winsor & Newton or Liquitex, and uses small amounts right out of the tube, mixed with water, without such additives as polymers, thickeners or retarders. "My style works within the constraints of acrylics because the medium doesn't allow much reworking or blending. I don't work that way—I just put one stroke next to another." Taylor chooses from a variety of bristle, nylon and sable brushes. His pal-

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7 Next Taylor works in some intermediate values against the whites and lights he began with. Later he will paint in a few of the darkest darks to establish the other end of the range.

8 For reference during the painting process, Taylor tapes a piece of white paper onto the canvas near the area he is painting and projects the corresponding slide of that area onto the paper. As an additional check for proportion and accuracy, he refers back to the original pencil sketch as well. At this stage he has added some of the darks, which gives the illustration a full tonal range.

9 For faces, Taylor's palette consists of portrait pink light, Naples yellow, cadmium red, light blue violet, burnt umber and burnt sienna. Taylor's technique, putting brush strokes side by side and painting "shapes," not "things," lets the viewer's eye compose the object.

ette is generally scrap—illustration board, foam core, scraps of canvas or brown paper. As it dries, he simply throws it out and starts over.

Taylor begins by painting the whites or very lights ❻. "That establishes the value range from the very brightest aspect of the painting to the toned ground of the linen," he explains, "and helps me decide which parts and values in the painting will be left as canvas." After adding a few intermediate values, he paints some of the darkest darks to establish that range ❼. "Most of the darkest colors I leave until the end, because I don't put that many in—I'd rather fade to canvas," he says.

During the painting process, Taylor uses two references. First, he keeps the original pencil sketch on the floor near his easel, to check for proportion and accuracy. As an additional reference, he tapes a piece of white paper onto the canvas near the area he is painting, then projects the corresponding slide of that area onto the paper ❽.

Taylor takes his time at this stage, because it is difficult to get back down to the linen if he makes a mistake. When it does happen, he recommends laying the canvas flat, scrubbing the area with a clean bristle brush and clear water in a circular motion, wiping away the excess, and repeating as necessary.

The painting's primary colors are those of the American flag, a development Taylor says caught him off guard. "I was involved in putting the proper images into the painting, and the colors almost emerged on their own—Barbara Bush's red dress, the blue uniforms, roses. Because they're true to the event, I think the colors really work."

In terms of rendering light and shadow, Taylor subscribes to a basic warm and cool color theory—objects in light are warm, while those in shadow are cool. "That changes a lot, though," he says, "especially in faces, where there might be a cool reflection or a hot shadow." The face palette for this painting consists of portrait pink light, Naples yellow, cadmium red, light blue violet, burnt umber and burnt sienna ❾. Percentages vary depending on lighting and skin tone.

Part of Taylor's "finding and losing images" style involves rendering certain areas in very sharp focus, in contrast with those painted more impressionistically ❿. For unpainted areas that will remain outlined, he mixes thinned Payne's gray and burnt umber to simulate a drawn line ⓫.

RENDERING TYPE

One of the unifying elements in the composition is the large field

THINKING BIG, GROWING FAST

From the time I got started in this business, I always thought big," says Dahl Taylor. "Regardless of the scope or budget of a job, I treated each one like it was a big corporate project. So even if my fee was $300, I worked like it was $5,000—using large canvases, working on linen, spending a lot of time getting the references right—making each one the best it could be."

It's a work ethic that has paid off for Taylor, whose clients include such corporate giants as General Electric, Lily Pharmaceuticals, Abbott Pharmaceuticals, A.L. Labs and R.C.A. Records. His illustrations have appeared on the pages of numerous national publications, including *The New York Times*, *McCall's*, *Forbes*, *Reader's Digest* and *TV Guide*. Six of his paintings are part of a permanent display at the New York State Museum in his hometown of Albany. He has just completed the Broadway theater poster for Neil Simon's latest play, "Jake's Women."

After ten years of working in a home-based studio, Taylor made another big move last year. Along with two other freelance illustrators, he leased a studio, the fourth floor of a Victorian-era book-bindery, minutes from downtown Albany. "We had a lot of fun adapting the space," says Taylor. Renovations kept the industrial atmosphere intact—maple factory floors, old brick walls, exposed aluminum ducts and rafters—and even capitalized on it with aluminum mini-blinds and warehouse light fixtures. Though the majority of Taylor's assignments now come from New York City, he has no plans to move. "I'm all set up here—a great studio, a fax machine, Federal Express account, an agent in Manhattan. I believe this is where I can be most productive."

Just as his business continues to grow, Taylor's art constantly evolves. One new direction takes his abbreviated style even farther—working on toned paper, he sketches with charcoal and chalk, adding paint very sparingly. Using this technique, he has just completed 80 drawings for a series of videos on abnormal psychology. He is currently exploring its application to animation.

Taylored Art Dahl Taylor created this painting for an RCA Blue Note album cover.

of type from the wall of the memorial itself. Hand-rendering this type would be a time-consuming process in any case, but the method chosen by Taylor made it even more so: "I was trying to make that wall come out of the canvas. I projected the type and traced it with pencil, then started adding the gray mottled marble around the type. In certain areas I painted a dark color inside the type itself. It was a roundabout way, to build up the wall around the type rather than painting a marbled surface and then putting the type on top. It was a slower way to do it, but it wouldn't have looked like the rest of the painting to do it the other way." ⓬

As with the rest of the painting, deciding which areas of the wall to render more fully and which to leave to the bare canvas, was an intuitive process: "It revealed itself. As I was finishing the painting I would reassess where I'd left the marbled wall, and added some and even scrubbed some areas clean with water and a brush." A process, Taylor says, that involves "a lot of squinting."

INTEGRATING IMAGERY

For Taylor, the challenge at this point is to make the disparate imagery work together compositionally. His solution: working the entire canvas at once. "I'll work on a face, some other image, or a field of color for awhile," Taylor says. How long he works on a particular section is dictated by the amount of time it sustains his interest. "In the style I work," he notes, "it's detrimental to keep painting when your concentration breaks. The minute that happens, I stop, find another image on the canvas, and work on that until I begin to lose interest there. Then I move on to the next."

According to Taylor, such constant movement from one image to the next avoids overworking. It also helps in the decision-making process. "If I have trouble resolving a certain area, I go on to something else. When I return to that area later, very often the solution almost presents itself. And because part of my style involves leaving as much canvas as possible unpainted, decisions about how far to take it need to be made in my head, rather than on the canvas." Bringing the entire painting up together also makes for an integrated effect.

At a certain point, according to Taylor, completing the painting becomes a matter of simply putting down the brush. How does he make the decision? "There's no formula," he admits. "I just stop when it's done." ■

Rebecca T. Godwin is an Albany-based advertising and public relations writer.

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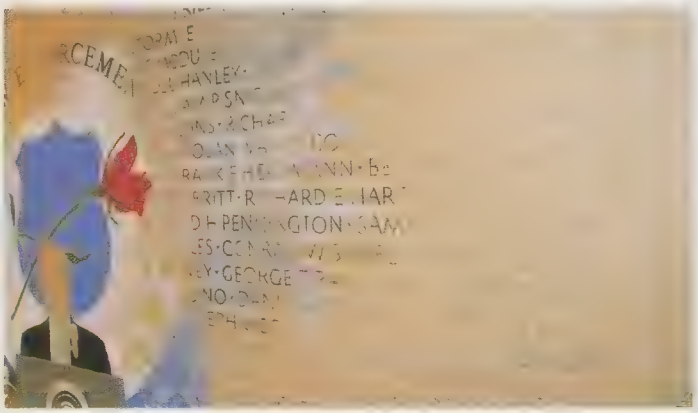


10 Taylor renders certain areas tightly, such as the presidential seal, providing contrast to areas painted more impressionistically or left unpainted altogether. For such detail work, he uses sable brushes ranging from No. 1 to No. 6.

11 To emphasize the outlined areas that will remain unpainted on the canvas, Taylor uses a semi-dry No. 2 sable brush and a mixture of thinned Payne's gray and burnt umber. He drags the brush over the outline to simulate a pencil or charcoal line.

12 Taylor painstakingly rendered the type from the wall of the monument, adding traces of the marble texture behind it to give the type a carved quality without adding undue weight to the composition as a whole.

Livinglass: Designing the Light Fantastic

How one design firm combines calligraphy, typography, color and light to create a 120-foot glass donor recognition wall for an urban hospital.

By Todd Schwartz

A curving, 120-foot-long tunnel of hospital corridor stretched into the distance in front of designer Bill McConaughy. It was his first visit to the site of his firm's latest project, and the yawning space inspired little more than somnolence. It wasn't until he began walking down the corridor that he suddenly saw the light—and the many design possibilities.

A widely recognized calligrapher, McConaughy, of Anderson/McConaughy Design in Portland, Ore., had originally been called in to do the lettering on a simple series of wooden donor recognition plaques for a hospital fund-raising project. The plaques would hang in the long hospital corridor, which leads to the object of the philanthropy, the new birth center wing of this large urban hospital. The idea was to solicit donations to the birth center by selling plaques honoring and bearing the names of people born over the years at the hospital. The funds would support maternity and child care.

By the time McConaughy had this first view of the corridor leading to the new wing, meetings with the hospital's interior designer had expanded the idea of wooden plaques into a proposal for a fairly elaborate custom vinyl wall covering. Maybe. Or maybe brass plaques. Or maybe...

Suddenly, an idea ripe with possibilities presented itself. The other side of the long corridor was all glass—120 feet of six-foot-high windows onto a courtyard, with the sunlight elbowing through like seraphim late for the last train. Immediately, McConaughy began waving his arms and ad-libbing the idea for a giant wall of light and life. "As soon as I saw the wall of windows," he remembers. "I knew it had all the right elements. The client wanted a donor recognition medium that would honor birth and life and caring, as well as offering the donor an appealing place to see their loved ones' names—and what has more life to it than a wall of light? Right away I saw large calligraphy and color. I had a flood of ideas."

He didn't, of course, have a trickle of an idea how he could actually do any of the things he was inventing, but no good creative individual lets trivialities stand in the way. Eventually, this bit of verbal tap-dancing would grow into the Livinglass: a 120-foot-long wall of color, calligraphy, type and photos sandblasted onto large glass panels mounted two inches in front of the windows in the corridor. Glued to these glass panels would be hundreds of glass plaques, sandblasted with the names of donors to the birth center. McConaughy did not know any of this on that first day, but luckily he had heard of a group of Portland glass artists called Savoy Studios.

CONCEPT AND COMP

McConaughy went straight from his meeting at the hospital to introduce himself to Dan Legree at Savoy, and the two of them found fortuitous chemistry right from the start. They began designing the glass donor wall over cups of coffee. "The juices started flowing, the ideas started rolling," recalls Legree, "and very soon we were talking about gluing up glass donor plaques on a sandblasted background." Savoy's extensive experience in fused and glued

Photos by Steve Wanke

Seeing The Light When Bill McConaughy saw that the site of his firm's next project was a window-lined hallway, the idea of working in glass hit him like a bolt from the blue. Here are the results of an 18-month design and fabrication process that combines brush calligraphy, a variety of folk imagery, computer-assisted design, photo-etching, and airbrushed lacquers to produce this striking donor recognition wall for Emanuel Hospital, Portland, Ore.

❶

1 McConaughy's Livinglass logo evolved as he tried different calligraphic elements over a Hopi paleoglyph (top left). McConaughy works with everything from bamboo, steel pens, rope and feathers to traditional reeds, quills and brushes in drawing his letters, on dozens of different papers as well as leather and plastics (top right). With the central logo element complete, he then altered the Matrix Tall typeface that formed the word Livinglass and overlaid calligraphy of the client's name (bottom left). The client's existing logotype replaced the calligraphy in the final version (bottom right).

sculptural glass, as well as large-scale architectural glass installations for settings as diverse as New York City's legendary Tavern On The Green, Trump's Taj Mahal and the private residence of the Kuwaiti ambassador to the United States, were just what the hospital project ordered.

Back in the design studio, McConaughy and partner Dave Anderson brought in a copywriter with whom they often worked (your humble author) to put a name and a copy direction on the project. The name Livinglass was created to express twin ideas: that the project honored and supported birth and life, and that the glass itself would be constantly growing and changing as new glass donor plaques (called "prisms") were added to the large panels over the years. The tagline "Our Legacy Of Beginnings" also served a dual purpose, indicating that the names on the wall were those of people born at the hospital and also including the name of the Legacy hospital chain which owns the facility. The creative team decided that the many typographic and calligraphic elements on the wall would consist of the "possibilities" of a person's life: occupations (butcher, baker, graphic designer), religions, relationships (husband, sister, uncle, second cousin)—a spray of life's many paths along the 120-foot length of the glass.

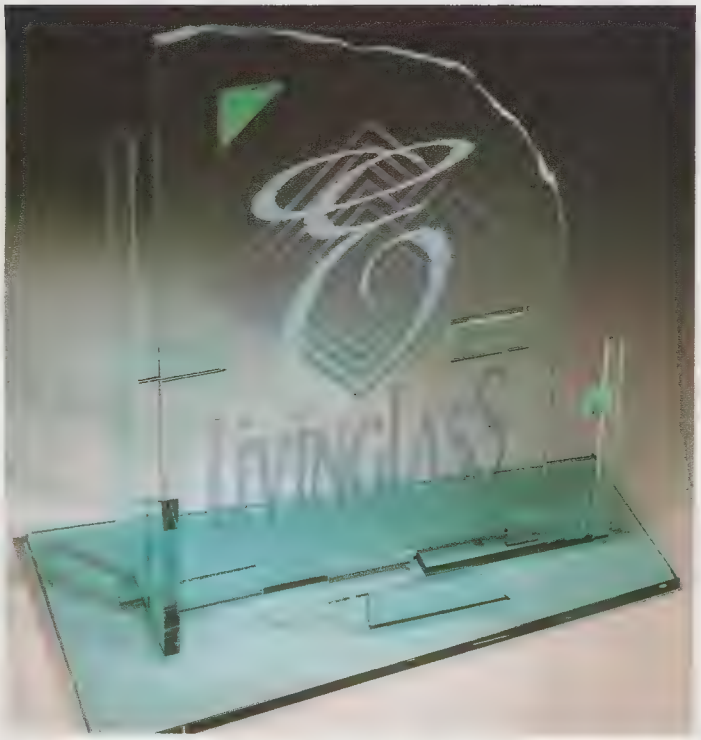
McConaughy set to work designing the Livinglass logo. "I'd been thinking in terms of circles—birth, life, the earth—and I thought the Livinglass name needed a logo treatment that expressed no beginning, no end," McConaughy says. "But rather than a simple circle I remembered a Hopi Indian paleoglyph I'd seen, a kind of mandala that means Mother Earth. I combined a rework of that with a calligraphic "E" for Emanuel Hospital." ❶

For the type used in the logo

and on the wall itself, Anderson and McConaughy chose Matrix Tall from Emigré. "These very hip type designers in Oakland do great work, creating faces that have a lot of math and computer science behind them—but keeping that devil-may-care feel," says McConaughy. "We chose Matrix because the caps had a very interesting ascender and descender, an unusual triangular serif and a sort of calligraphic thick and thin look to it. We saw it set and it seemed to look like people dancing, kind of paleoglyphic. That dance/music metaphor went well with the creative ideas behind the wall, so we took the face and redrew it to customize it for this use." Matrix was also well suited for use on the donor prisms, its compressed format allowing for a high character count on each plaque. McConaughy's finished logo incorporated an eventual compromise with the client: the hospital's existing wordmark in Palatino.

With name, logo, copy and enthusiasm in hand, the designer went back to Savoy Studios. With the help of Portland's Ostrom & Company, a shop specializing in using photo-sensitive emulsion techniques to etch glass and metal, a couple of test donor prisms were photo-etched (more about that process later) and a small tabletop comp was crafted ❷. The result was dramatic, and on the strength of the comp, the client approved a larger test and a feasibility/budget proposal. The Livinglass was coming alive.

Next, McConaughy drew the lettering for "Our Legacy Of Beginnings"—calligraphy that would eventually be four-feet-high and longer than a minor dictator's motorcade. He accomplished this feat on the first pass, working on a light table with a drawing of the wall's 6 x 120-foot architectural structure underneath ❸. "I had the lettering in mind, and I'd been practicing in pencil," says McConaughy, "but it's rare when it comes together on the first pass!"

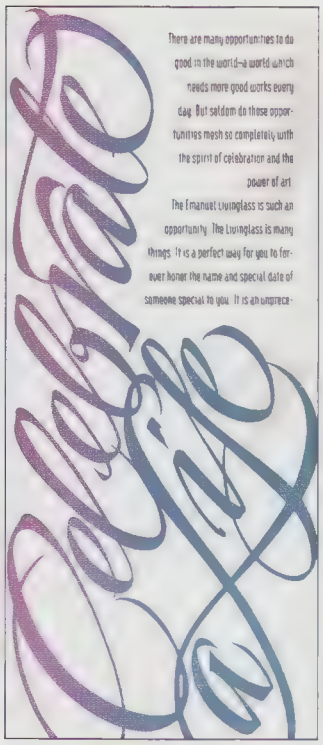


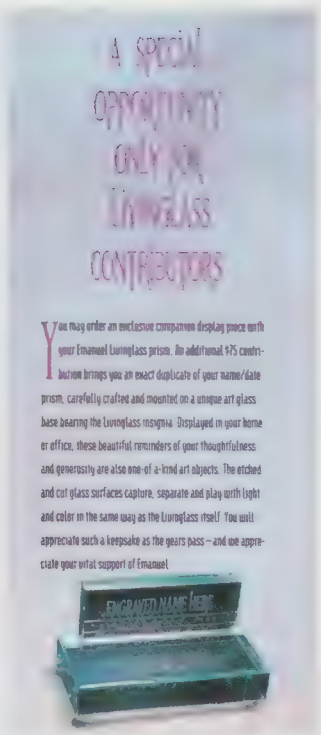
2 The first tabletop comp of the materials and techniques to be used on the Livinglass demonstrated photo-etched glass donor plaques clear-glued to a sand-etched glass background. "The first small comp was as much a test of the communication between our design shop and the two glass studios as of the production processes," says McConaughy.

❸

3 McConaughy's pointed brush calligraphy of "Our Legacy of Beginnings," which would eventually be more than 40 feet long on the finished wall, was practiced in pencil over architectural elevations of the windows in the hospital corridor. The final pass was drawn with a sumi bamboo brush on handmade Italian watercolor paper (Fabriano).

Although McConaughy is known nationally for his extraordinary flair with calligraphy, the design firm does not attempt to include it in every project. "We use calligraphy as a counter to geometric forms and type—it gives you more creative control to fill a space," McConaughy explains, "and this space was screaming for it. We had 50 hard rectangles with cold metal, linear architecture and slick wallpaper. It's like music, like Mozart—we needed the contrapuntal arrangement, the 180-degree rotation of calligraphy against the regularity of the hallway."


There are many opportunities to do good in the world—a world which needs more good works every day. But seldom do those opportunities mesh so completely with the spirit of celebration and the power of art.
The Emanuel Livinglass is such an opportunity. The Livinglass is many things. It is a perfect way for you to forever honor the name and special date of someone special to you. It is an unprece-
Celebrate Life


A SPECIAL OPPORTUNITY ONLY FOR LIVINGLASS CONTRIBUTORS
You may order an exclusive companion display piece with your Emanuel Livinglass prism. An additional $75 contribution brings you an exact duplicate of your name/date prism, carefully crafted and mounted on a unique art glass base bearing the Livinglass insignia. Displayed in your home or office, these beautiful reminders of your thoughtfulness and generosity are also one-of-a-kind art objects. The etched and cut glass surfaces capture, separate and play with light and color in the same way as the Livinglass itself. You will appreciate such a keepsake as the years pass – and we appreciate your vital support of Emanuel.
ENGRAVED NAME HERE

4 Anderson/McConaughy's brochure/reply envelope for the Livinglass project combined color photography with backgrounds of iridescent glass and painted gesso. Heads are set in Matrix Tall and body copy in Modula, both from Emigré. Natural foliage outlines are screened under the text. McConaughy created calligraphy for the Celebrate Life theme. Gluestrips and a perforation along one of the folds allow the donor to enclose a check and return it in a postage-paid envelope.

5 The large-scale comp for the hospital lobby had to both stand out (to attract donors) and blend in (to appease the hospital's rather finicky interior designers). Color and material choices for the plant stand base were dictated by existing wall and floor coverings. The donor prisms on this first full-scale window section feature the names of the client's Board of Trustees.

SELLING THE IDEA

To find out if the idea of a glass donor wall would be accepted by the public, hospital officials asked the design team to create a 2 x 6-foot lobby display that would highlight examples of the techniques involved on the Livinglass panels. Mounted on a structural base incorporating a planter box, the comp functioned as a campaign marketing tool. Sales copy was developed by the writer, and Anderson/McConaughy also designed a specialized brochure to solicit support through the sale of donor prisms ❹.

The comp required several vendors to produce. "We bothered the hell out of welders, painters, carpenters," remembers McConaughy. The artist, whose background includes architecture, pre-med, music and art, designed a support structure and window frame channel to hold the 190-pound piece of glass; this had to be fabricated first. It was then taken to a local Cadillac dealer for several coats of two-tone pearlized paint. A waterproof pan was made for the planter box and cabinetry built to match the hospital's strict interior design specifications. Calligraphy was sandblasted on the glass (more about that later) and name prisms were applied ❺.

Beyond its marketing application, which has resulted in a steady stream of inquiries and the sale of several hundred donor prisms, the large comp was also a chance to see what six feet of "this glass madness" (as McConaughy calls it) would look like. Would it be a cohesive entity, or would it be a cacophony of color and type and craziness that would be the visual equivalent of being attacked by ducks? It turned out the result was unique and startling, and that the time to take the Livinglass to full size had come.

INSTALLATION DESIGN

The marketing piece had answered a few of the basic questions about the project—and created several new ones. How do you get the original calligraphy transferred and sandblasted in exact form and position over all the panels of the glass? How do you show that position? How do you get and hold the 1/16-inch accuracy that was necessary as the letters spanned multiple panels? How do you achieve maximum prism coverage for maximum fund raising? ❻

And those weren't all of the issues—for example, the original concept of art elements that displayed life's "possibilities" on the wall had been replaced by the idea of including several appropriate quotes as design elements. And the size and style of the donor prisms had been simplified. "In the beginning

we'd pictured the donor names on plaques of different sizes, shapes and thicknesses," says Dave Anderson. "We thought it would be very interesting to create sort of a multidimensional sculpture with the names." Two factors intervened: the budget and the client. A single width and thickness (⅜-inch) would keep costs down, and the hospital was concerned with favoritism issues that could arise when one donor's name was treated differently than another. The one variation that would remain would be the height of a few of the prisms, since donors could specify that several names in "family groups" be etched on a single, taller plaque.

After several hours in the still, dusty and underfunded air of the public library, the writer and designers presented a group of selected quotations to the client. When they were approved (after more than a little discussion and change), McConaughy began to letter and design each quote as a unique art element, using a variety of different calligraphy styles—from a menacing German Blackletter for the first part of an Anne Frank quote to incorporating African shaker art in the treatment of a Kenyan tribal saying ❼. He had to keep in mind that each graphic was going to be enlarged by a factor of 25 to 1. Also, each brushstroke deleted a few hundred dollars of fund-raising space. He sketched on tissue overlays so he could see the architectural plans of the window as he worked.

McConaughy played with both format and placement to keep the quotes from becoming stiff and stagnant. He didn't want the Livinglass to look like a courthouse fascia, with heavy inscriptions and the old-fashioned letter "V" used in place of the letter "U." "Designing the quotes was great fun," the artist recalls. "As a designer you have a wonderful opportunity to control movement and orchestrate the dance of the eye. I used circles and other nonlinear formats to loosen things up and create texture. In placing the quotes on the Livinglass I was looking for a push/pull effect, using all the elements combined with the play of light to seduce the viewer from the big to the medium to the small. From the large calligraphy to the quotes to the name prisms. The viewer has to work a little, but they get a payoff in the end."

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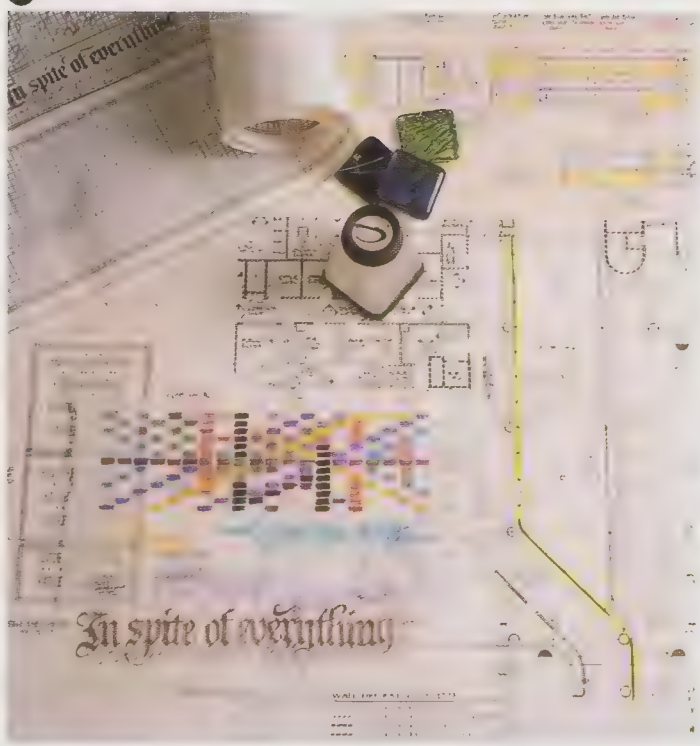

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6 Architectural drawings, both plan and elevation, were McConaughy's starting point as he determined size and placement of the large-scale elements on the Livinglass (which follow the yellow line visible in the architectural plan). Working on tissue overlays, McConaughy sketched placements that would take into account the corridor's pillars, doors and window supports.

7 Using many different calligraphic styles combined with type, traditional bamboo painting, a historical photo and art from an African drumhead, McConaughy created 22 individual art elements for the Livinglass. Each was an illuminated quote, relating to birth, life, caring and nursing. McConaughy likens each bit of calligraphy to jumping off a cliff and making sense out of the fall: "Each style has a lot of history, but I like to make each one new as I letter. I'm looking for a rhythm, a kind of natural, undeniable visual velocity that brings the words to life."

USING THE COMPUTER

Realizing that translating all of this into reality over approximately 720 square feet of mullioned, pillared window would require an incredible degree of accuracy and planning, Anderson/McConaughy then turned to Michael Strickland of Portland's Strickland Graphics.

DESIGN AS THEATER

Some creative teams know each other so well that they finish each other's sentences. Dave Anderson and Bill McConaughy begin each other's sentences. Throw out a design challenge and they will immediately launch into a full-speed four-lobe brainstorm of ideas, back and forth, up and down—the graphic arts equivalent of Ella Fitzgerald and Mel Torme singing scat. In the end you finish with lots of laughs, the cure for cancer, the Holy Grail, the secret of life, two great recipes and, oh yeah, a wonderful solution to the design challenge.

They balance each other. Both have giraffe neck-length resumes of design credentials and awards. McConaughy, he of the laid-back persona and FM radio voice, is the visionary, the rocket man. Show him a 1974 Greyhound bus and he sees a pink space shuttle. Anderson, he of the bearded professorial countenance, is the adventuresome realist. He is the leader of the scuba diving team who keeps one eye on the depth gauge and the air supply no matter how pretty the fish are. Together they manage to give their clients leaping, spinning, tap-dancing, rapping, jazzing art that still sells a lot of widgets.

"What we do is entertain," explains McConaughy, who is nationally known and much sought after for his skills as a master calligrapher and scribe. "We compete in a super-saturated mass media environment, so we view our projects as theater. We try to imbue each design with lighting, movement, drama—all the theatrical aspects combined with a core of effective communication. Our background in music gives us an awareness of timing, flow and dynamics. We use calligraphy and type like explosives. We want each of our designs to perform, to orchestrate the movement of the eye, to break free of two dimensions," McConaughy says.

"We take the client's needs and goals and try to enhance and expand them with original solutions," Anderson adds, "but we never underestimate the importance of the marketing side. We're paid to create art that sells for the client. We focus on communicating effectively for the client and with the client. We're fortunate to be able to be somewhat selective in the projects we take on."

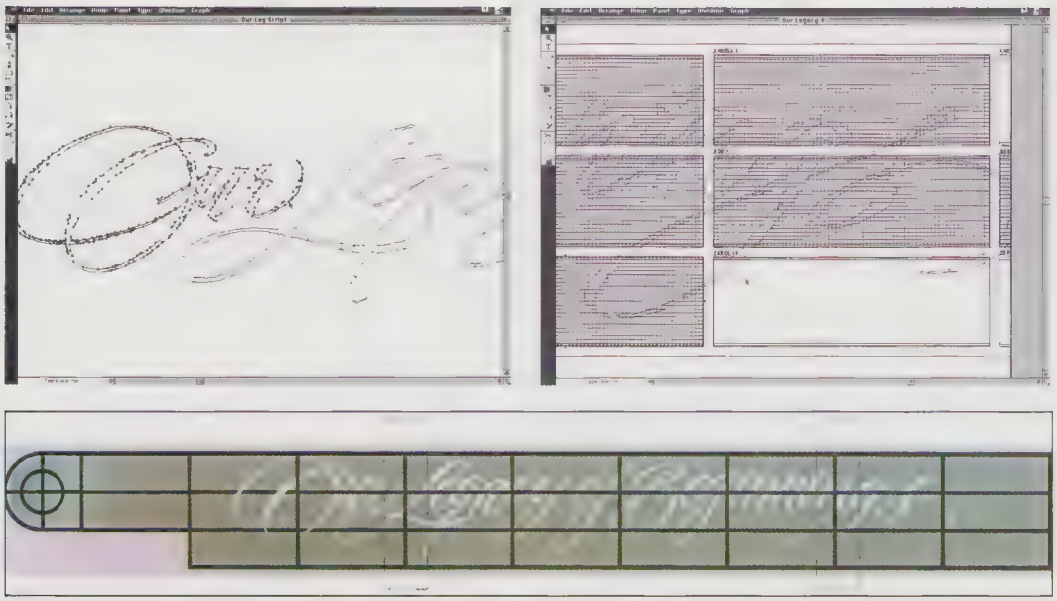
Beyond the willingness to take risks, probably the most definitive aspect of their work is its melding of the graphic designer and the craftsperson. The use of hand-drawn lettering, often on paper of their own making, juxtaposed with high-tech materials, printing and production techniques is an Anderson/McConaughy trademark.

"The formula," McConaughy says profoundly, then flashes a smile that wings a chalk-laden eraser at the bespectacled head of profundity, "is the complexity of the variables divided by the simplicity of the solution. If the accepted wisdom says something needs to be glued, we'll try tying it, pinning it, riveting it, breaking it, stretching it—then maybe we'll glue it! It's a perpetual quest for the happy accident that creates great design."

Believe me, these two gentlemen are a happy accident that is always just ready to happen.

Putting on the Derby Anderson/McConaughy created the poster above as a limited edition Derby Week lithograph for 500 special guests at the Hyatt Regency in Louisville, Ky. Featuring a wide range of lettering styles and illustrations of Derby Week events, the art was done on Fabriano watercolor paper.

Arts and Letters A sampling of recent works from Anderson/McConaughy Design demonstrates their creative diversity (at right). Examples shown include illustrated hand-bound books, sculptured paper casts, hologram foil stamping, calligraphic titling and metal sculpture.



8 Scanned into the computer as flat art, McConaughy's calligraphy and the Livinglass type were combined with a one-inch grid and positioned over the layout of the columns and mullions of the 120-foot wall. After plotting points and using Adobe Streamline to convert the calligraphy into a more easily manipulated PostScript outline (top left), McConaughy and computer production expert Strickland used Adobe Illustrator to position and reposition the lettering, working around the negative space created by mullions, supports and door frames (top right). The color print shows the final positioning of the type (below).

Strickland, whose design studio is often used as a beta test site for leading-edge hardware, firmware and software tools, is an expert in computer graphic design and production techniques.

The team had the entire window measured to a tolerance of 1/32-inch and rendered by an architectural student to confirm their existing drawings, including the radii of the window's round sections. The result was then recreated on Strickland's setup: an Apple Mac IIfx running System 7.0, with 20 mb RAM and a 640 mb custom drive, a 19-inch RasterOps color monitor with accelerated 24-bit card, and a new variety of four-color process printer, the Tektronix Phaser III PXi.

A one-inch grid was applied over the framework of the window. Using Adobe Photoshop, McConaughy's calligraphy for "Our Legacy Of Beginnings" and the type for "Livinglass" was then scanned into the system. Adobe Streamline was used to convert the rough-textured calligraphy into PostScript outlines which were manipulated in Adobe Illustrator **8**. Further alterations were made to the Matrix Tall typeface for "Livinglass," and the graphic elements of construction lines and ovals were added. The calligraphy and type were then adjusted (condensed, enlarged, tweaked) to maintain a smooth visual flow across the mullions which link the 50 panels of glass, as well as around the three-foot columns that stand close to the window, altering sightlines.

The team then scanned in and positioned the designed quotes **9**. Halftoned photos of two legendary Emanuel Hospital nurses were also incorporated in the final design, using Photoshop to retouch old newspaper clippings. "We had to be very accurate with our use of the one-inch grid," recalls Strickland, "as we needed to give tight direction to the people working on the glass, and we had all this gorgeous calligraphy and type spilling over three vertical levels with two-inch mullions in between!

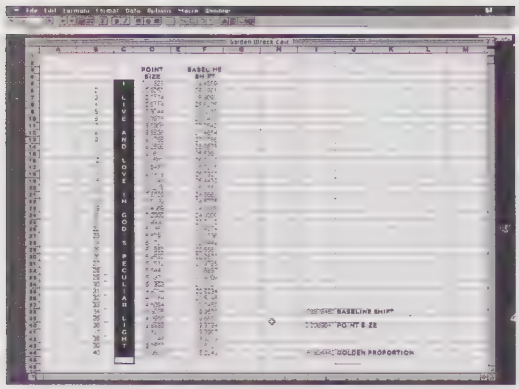
"The process we go through on the computer to visualize each component takes a little longer—but when you see what you like, you're already well on the way to finished production. You're ahead of the game. One file works for everything: You can print color comps for the installers and the client, you can give the file to the sign makers to drive the pounce path plotter, you can generate FPOs for masking. It's a very smart tool."

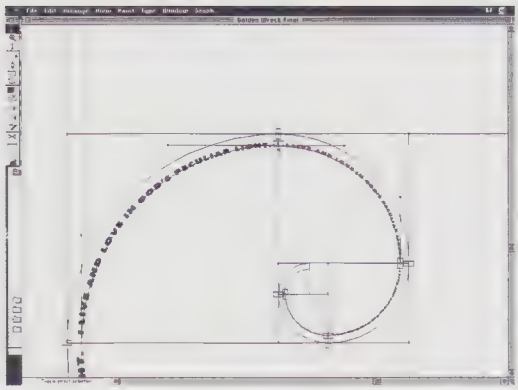
THE BIG IQ TEST

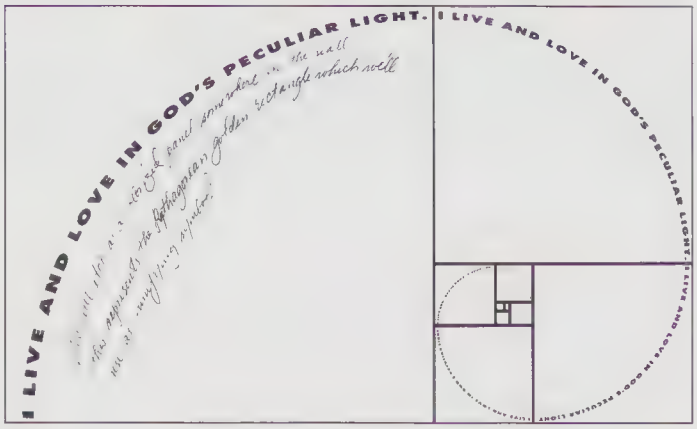
All the power of that smart tool was necessary for the next step: determining a grid for the most effective (read: most donation-generating) placement of the donor prisms, and the most artistic installation sequence. It turned into a two-week IQ test. "We had to maximize the plaque count, legibility, ease of installation, ease of sand engraving," McConaughy says. "It was a big puzzle. And we had to produce archival documents clear and simple enough so that an installer ten years from now would accurately understand how and where to add names to the glass."

For the master installation plan, each of the three horizontal rows of mounted panels that make up the Livinglass was named top to bottom (Angela, Bob, Carol) and numbered sequentially left to right. Knowing that the Livinglass would slowly fill up with name plaques over many years, McConaughy developed a symmetric, mirrored installation pattern for each panel, based loosely on both the criss-cross interlocking strands of Navaho Indian basket-

9







9 Positioning and producing the quotes on the Livinglass required tremendous accuracy and even some serious math (top left). A quote from Michaelangelo was plotted along a type path representing a "golden proportion" spiral, with the type growing smoothly and progressively smaller (top right). Using the golden mean proportion of 61.8 percent, Strickland used Microsoft Excel to calculate the point size change and baseline shift for each character, then sized the characters in Illustrator. He then positioned each character, using the top of each letter to define the spiral (below). Other quotes were also refined and positioned using Illustrator.

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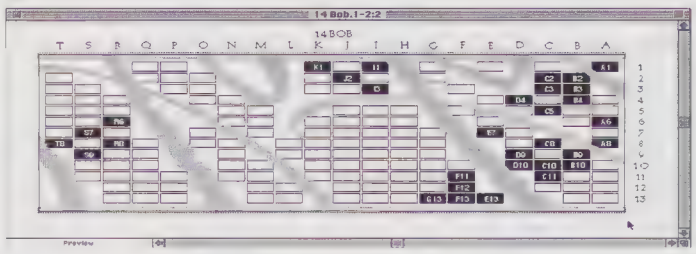
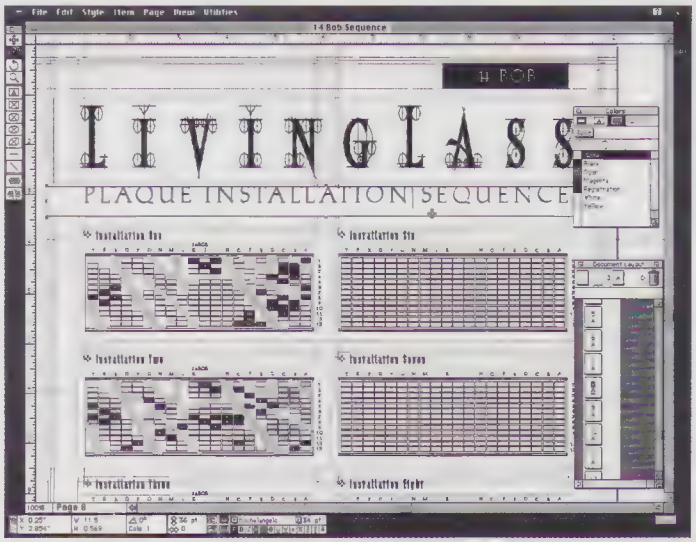




10 The prism installation sequence diagrams for the Livinglass panel "14 Bob" (denoting the 14th panel from the left in the middle row) are shown here. The screen shows the pattern of the initial 32 donor prisms to be installed on this piece of glass (top). The second screen shows the continuing installation sequences that will eventually fill 14 Bob (bottom). Beyond producing plans for the prism installers, the sequential numbering system provides a map to aid donors in locating their prisms on the wall.

weaving and the rising and falling melodies of music ⑩. An imaginary time-lapse movie of the installation sequence would reveal the woven diagonal patterns formed by the prisms emerging on each individual pane, with groups of prisms appearing all over the Livinglass in a syncopated splatter, like raindrops hitting the outside of the window.

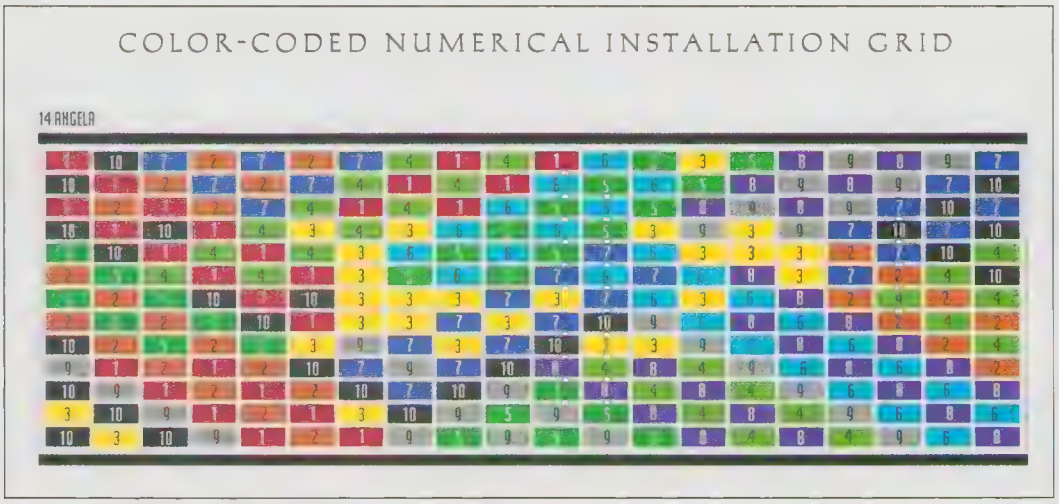
The prism grids (13 high by 20 wide per panel) were then colorized to display the three stages in the installation sequence. The third stage was a "wild card" to accommodate the family group plaques that will contain several names. The complex color comp was then output, panel by panel, on the printer, becoming a detailed guide for the name prism installations that Savoy will perform four times per year ⑪. The quarterly schedule will allow donor plaques to be glued on in manageable numbers.

HAVING A BLAST

With the last of the design and manufacturing documents completed on the computer, precut panels of ½-inch-thick safety glass began arriving at Savoy Studios. Each panel was numbered from the grid and carefully measured, since the glass factory delivers them with variations of ⅛-inch or more from the specified length. The panels were also checked for 90-degree corners, and any alterations were made. A center point was marked, to correspond with the computer-generated grid lines.

The panels then moved to Ostrom & Company, where the photo-etching took place ⑫. Of the two sandblasting procedures used on the Livinglass, photo-etching was used for the type on the donor prisms, the designed quotes and the halftones. Photo-etching can hold much finer detail than hand-cut mask sandblasting, retaining the power and snap of the original calligraphy and type on the quotes. Very fine lines (down to

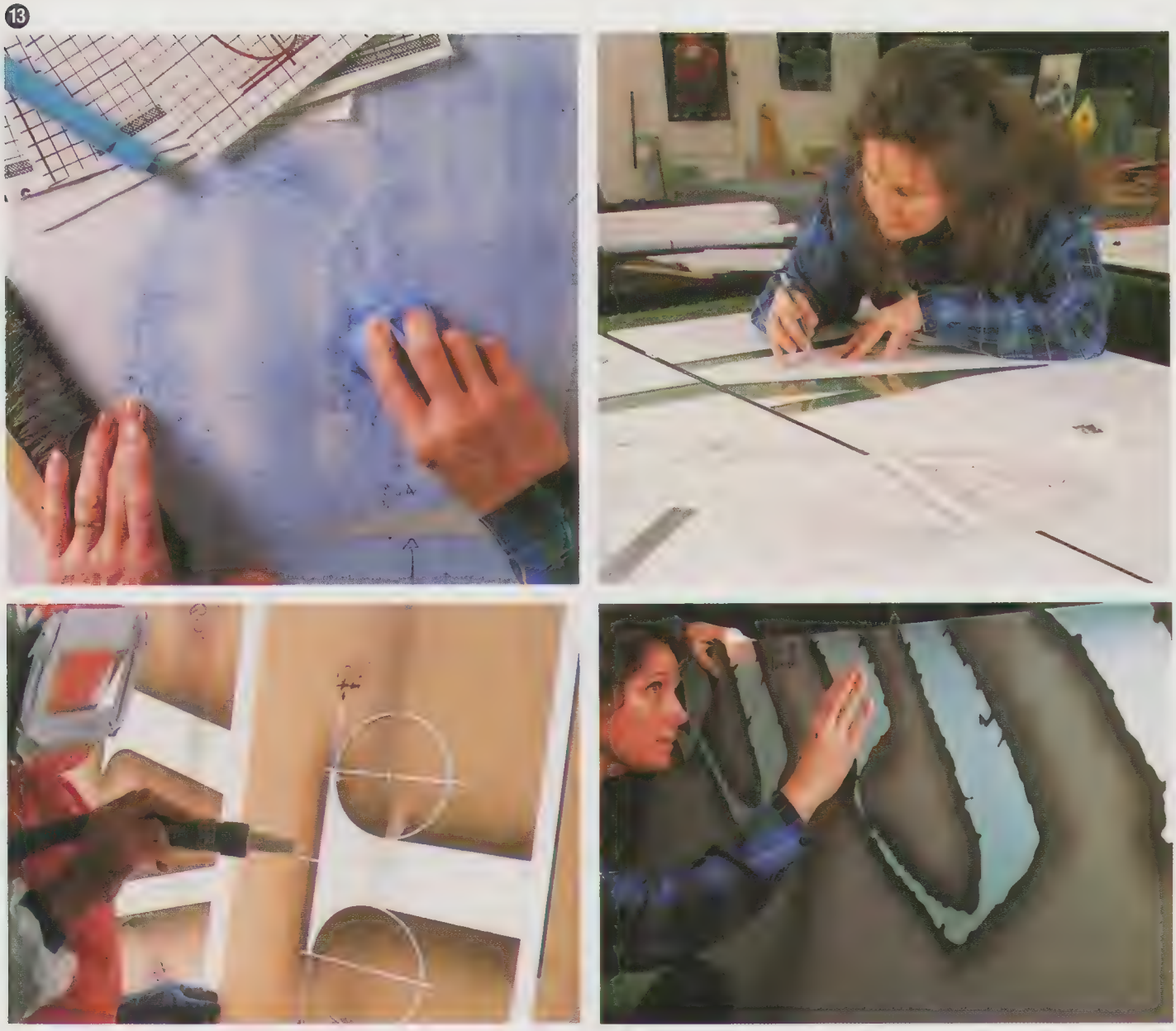
11



11 As a visual guide for the installers, Strickland and McConaughy assigned a different color to each installation sequence, revealing the intricate interwoven patterns of the groups of plaques as they appear on the Livinglass. The documents that form the long-term guide to each panel (14 Angela is shown here) were then output on Strickland's four-color Tektronix printer.

12

12 The photo-etching process involves spreading the glass with a photo-sensitive emulsion and placing a film positive of the image on the emulsion. The thickness of the emulsion determines the depth of the eventual etching. After a few minutes' exposure to ultraviolet light, the emulsion hardens, allowing the positive image, which remains soft, to be washed away, revealing the glass (top left). In the blasting booth, fine-grain sand is used to etch the image (top right). Once the specified depth is reached, the remaining mask of hardened emulsion is soaked in water until it comes off, and the glass is pressure-washed (bottom left).



13 For the large scale, deep-cut sandblasting of the 40-foot-long word "Livinglass," each panel was covered with white vinyl masking, and then with a paper overlay carrying perforated outlines. Chalk was pounced through the perforated lines (top left). "Our Legacy" and the "Livinglass" type were projected and traced onto the masking (top right). Both were hand-cut using X-Acto knives. The panels were sandblasted in the booth, washed, and depth and consistency of the cut were checked (bottom left and right).

½ point) and dots are possible with the photo technique, in which a photo-sensitive emulsion is spread on the glass and a film positive of the type or art is placed in position. Exposure to UV light hardens the emulsion, which forms the mask for sandblasting after the soft positive image is washed away. Fine grain sand blasted at lower pressure holds the tight detail. All the photo-etched elements were blasted on the front (hallway) side of the panels.

The glass then went back to Savoy for the hand-cutting and sandblasting of the large calligraphy and type ⓭. The files from Strickland's computer were given on disk to a local exterior/display graphics producer, Sign Wizards, which output full-size pounce patterns (paper overlays with the original line art replaced by perforated lines through which powdered chalk can be applied to "draw" the image) of the large Matrix type. At Savoy, the back (window) side of each panel was covered in white vinyl masking, and the "Livinglass" type was "pounced" onto it. Savoy then carefully projected film positives of the original "Our Legacy Of Beginnings" calligraphy to exact size and position and traced it onto the vinyl. Film of the original lettering was used to retain the texture of the brush on paper, rather than the files from the computer, which had been converted into smooth PostScript outlines. Finally, McConaughy checked each panel and sweetened the details of individual letters and brushstrokes.

Next, Savoy artisan Melissa Andrews, with extremely steady hands, went to work cutting away the vinyl masking following the pounced and traced guidelines. The depth of the sandblasting was then specified and the panels were blasted by Savoy artist Sue Grauten.

After washing, the painting of the fade inside the letters of "Our Legacy Of Beginnings" and "Livinglass" began. Artist Pat Fisk applied many thin coats of lacquer-based transparent paint with an airbrush, fading pastel tones light to dark, finishing with layers of clearcoat for protection. The vinyl mask was then peeled away ⓮.

As a last step, Savoy's Legree used blocks of glass to create free-form patterns attached at the rounded ends of the Livinglass ⓯. These sculptural introductory remarks announce the coming pattern of donor prisms as the length of the wall comes into view.

HANGING THE RESULTS

The finished panels were taken to the hospital corridor, and those that would hold the first donor prisms were placed on a specially designed installation cart. Following the installation sequence guide, plaques were attached to the back side of the glass with an optically clear ultraviolet light-activated adhesive. Completed panels were then placed in the McConaughy-designed "L"-channel which had been mounted on the top and bottom of each mullion of the window framework.

Now, on a bright day, the once featureless corridor becomes an energized rainbow farm, a ragout of movement, color and light. "It's been a long trail," McConaughy says of a design project that he never knew would involve chemistry, applied geometry, metallurgy, mechanical engineering and the odd piece of broken glass, "but it's come together incredibly well, I think, thanks to everyone involved. Dave, Savoy, Ostrom, Mike Strickland—they all made my spur-of-the-moment, 'Oh sure, we can do this,' to the client turn into 120 feet of glass art." Art that will someday hold more than 7,500 names of new lives; art that will eventually raise over a quarter of a million dollars to help new lives begin.■

Todd Schwartz is a writer in Portland, Ore., and Communications Director for the Oregon Health Sciences University Foundation.

⓮

14 Using an airbrush, artist Pat Fisk carefully blends layers of transparent lacquer over the sandblasted letters. Soft red at the top, the letters fade down to a soft blue. Six coats of UV-resistant lacquer protect the finished colors. After this step, the vinyl masking is peeled away and the glass is ready for installation.

⓯

15 With differently sized and shaped blocks of polished glass, Dan Legree creates the sculptural "lead-in" to the pattern of donor prisms on the Livinglass. The blocks are laminated to the panels with an optically clear adhesive that hardens after a few seconds exposure to ultraviolet light.

Monochrome Magic On Uncoated Paper

Create new moods and textures as demonstrated in this special photo insert.

Black and white is not what it used to be. More and more we encounter black-and-white photographs that have been toned or dyed with a wide range of colors, from rich olives to warm red-browns to cool blue-blacks. After the darkroom phase, new prepress methods combined with the tactile qualities of uncoated papers offer even more opportunities for tonal manipulation. The resulting "black-and-white" images might better be termed "monochromatic."

We challenged a top photographer and print house to produce an insert for *Step-By-Step Graphics* that would demonstrate these tonal effects, and to share their knowledge about how to successfully reproduce monochrome photographs on uncoated stock.

John Casado was a successful designer before he took up the camera. His experiments with printing on uncoated paper have taught him the photographer's end of this process. The Stinehour Press, a Vt.-based printing company, is renowned for its superb offset lithography as well as its expertise in printing black-and-white photography on uncoated stock. Together they produced the suite of images on the following pages. Accompanying the photographs are production notes that highlight the special techniques that were used to get the most from the paper and the presses.

TONE POETRY

While classic black-and-white photography continues to thrive, many photographers take a more experimental approach in their search for ways to distinguish themselves.

Such experimentation often involves playing with alternative uses of film and the chemistry of the developing process to create images and effects no one has seen before. One approach is to add tone or color to the original black-and-white print. The print may look blue, or sepia, or even a combination of two colors.

Toning is a chemical alteration or dyeing of the emulsion, which produces the dark tones, the "black" of black and white. This emulsion can be based on a number of chemicals, including silver, platinum, palladium, gum-bichromate or cyanotype. Toning can enhance depth, create color contrast or call attention to certain parts of the photograph.

In the toning process, for example, the silver can be chemically converted to another form, and this can create changes in color in the highlight, midtone and shadow densities of the black-and-white print.

Some photographers do their own developing and toning, while others may not have time for the darkroom. They are part of a growing number who look to such talented technicians as Leor Levine of LeMax Group in Los Angeles, who toned and developed this suite of photographs for Casado. He has developed a reputation for his unique printing and toning services for some of the best pho-

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"The Eye" (Duotone: black and red-brown; Strathmore Renewal Text, Chamois.)

Production Notes Photographer John Casado called the photo at right, "An image designed to make a printer dissolve into tears. I wanted to show how some really challenging images could be handled." The original photograph was toned in the darkroom with two colors, a cool, bluish gray and a warm, red-brown color, but Casado wanted to show how it could be handled as a duotone. His key concern was to keep the details in the eye open and to have the warm, flecked paper show through on the face.

What made this photograph difficult, according to camera operator Mike Arsenault, was keeping the edge between the very light and very dark portions while holding the very subtle shadows on the mouth and nose. The problem was the so-called adjacency factor: The way the black background butts up to the face structure causes the developer to work so hard that it creates shadow areas on the highlight edge. The image becomes overdeveloped and a white outline parallel to the edge may appear, about ⅛-inch into the black side. To compensate, in the second color of the duotone (not the black), the cameraman had to make the transition to the face carefully.

Says Arsenault, "The adjacency factor is one of my biggest nightmares. There are several techniques I use to avoid or erase it, but a lot of it is trial-and-error. The first thing is to avoid it to begin with. I might mix the developer earlier or turn the negative in the tray. I'm not exactly sure why these methods work, but they do. As a last resort, I might hand-etch the line away."

In this duotone, the red-brown second color defines the highlights and gives color to the image. The black gives depth to the shadow areas, particularly to the eye and the background.

"Fireman" (Tritone on Strathmore Renewal, Chamois.)

Production Notes The original image (top left) has a full tonal range, enhanced with both pale brown and cool gray toning. The tritone (opposite) will help hold the midtones while allowing the darks to be dense, but the color is not the same as the original. The white highlights in the shirt, on the buckle and the square form in the background will hold up well on the brightness of the paper.

The black printer (top right) provides a foundation for the second color (bottom left), a cool gray made up of black, reflex blue and transparent white. This brings out the midtones and enhances the shadows. The third color (bottom right) combines rubine red, process blue, process yellow, transparent white and matte varnish to produce a tan color that was present in the original toned print. Because this was printed on the same form with "Veiled Woman," Stinehour Press chose to compromise on the color differences between the two.

Editors' Note: The separations shown here are printed with process inks and only approximate the hand-mixed inks actually used to print the inserts.

tographers in the fashion, advertising and entertainment worlds. Levine helps photographers break the rules in the darkroom, using his own experience and flair for finding ways to make black-and-white photography stand out. He keeps records of each process, which he brings to bear on new work every day.

"People come to me for the ability to control the process while breaking the rules," Levine says. "Maybe I use the chemicals differently from what the manufacturers recommend, but by experimenting I learn to control these deviations. By making these creative mistakes on purpose, you can achieve some interesting visual effects.

"I don't believe that clients should ever avoid asking for something that they have visualized that might not work or look good. It's the printer's responsibility to guide them as to what is practical. If the designer doesn't ask for the impossible, the impossible will never be achieved."

PREPRESS ARTISTRY

Toning the photograph in the darkroom is one approach. The other is to make the tonal adjustments during prepress. A toned or black-and-white original can be printed as a duotone, tritone or quadratone, processes which can provide a greater range of tones.

A duotone, for example, is simply a halftone image that has been printed with two separate plates. Usually two colors are used, but duotones can also be used to gain greater depth in highlight and shadow areas by using two passes of the same ink. The first plate might print the full tonal range. The second plate then can add extra density just to the dark shadows. A tritone works in the same way, but provides the opportunity to add another color or more detail. The separations for duotones and tritones can be produced electronically or with a process camera.

Monochromatic photography can be printed with as few or as many hits of ink as budget allows. Casado notes, "A good duotone or tritone can be very expressive. You don't always need to use a six-color press. I have even been in situations where removing a color was the answer. Most of your work will be done in the creation of film, before you ever go on press."

The paper fibers, too, must be taken into consideration in the design, since they will show in the highlights. The color of the paper and fibers will tend to reduce the contrast, compared

(Continued on page 102)

"Jackie" (Tritone on Strathmore Pastelle, Fluorescent White.)

Production Notes The original (top left) was toned a reddish-brown. Casado specified that the printer concentrate on the detail in the face and hold the highlights in the hair. He was less worried about the subtle shadow between dress and cape, but really wanted the face to contrast with the background. Arsenault said the tritone (shown opposite) would help keep more detail in the clothing, but he was glad that Casado was willing to sacrifice a little detail in the dark areas. A tritone also makes it easier to match the toned original.

The second color (bottom left) is a purplish gray made up of black, rubine red, violet and transparent white. The clothing needs the black (top right) to get the depth of shadow, but the black was held back to give definition between the cape and the dress.

The third color (bottom right)—a red gray made of rubine red, reflex blue, process yellow and transparent white—further breaks down the shadow and gives the red tone of the original.

"Solarized" (Duotone on Strathmore Pastelle, Fluorescent White.)

Production Notes The original photograph (at top) has some reddish tone and is solarized for some interesting contrasts, but it is basically a dark photograph. Casado wanted to capture the mottled Polaroid quality and the mottling in the background. He also wanted to keep the highlights in the face brighter than normal. He asked to print this as a duotone on Strathmore Pastelle, Fluorescent White.

Mike Arsenault called this piece the oddball, adding, "I knew the exposure would be different on this one, but I didn't realize how different. I took a shot at capturing the darks and midtones, but it came out too heavy. This is where a press proof helps immensely. I got a chance to correct the density, and we used the paper's dot gain to fill in and capture all these shadows."

Because this image is dark overall, the black (bottom left) and second color (bottom right) printers work together to make this image dense and dark. The second color is a cool gray made up of black, green, brilliant red and transparent white. The black is kept open so there will be detail even in the dark clothing, while the second color gives the image its richness.

"Veiled Woman" (Tritone, opposite, on Strathmore Renewal, Chamois.)

Production Notes In the original image (top left), subtleties in the dark areas presented the real challenge. While the highlights go all the way to paper on the face, there are variations in tone even in the darkest areas of the clothing, especially at the waist. The background goes through a full range of midtones.

Arsenault said this was even more difficult than he thought it would be. "The background tone was quite dark and my first thought was to lighten it. I found the brownish paper compensated for my removing some tone from the background."

Arsenault concentrated on the veiled woman herself and picked up the detail in her clothing. He gave the black printer (top right) a longer exposure and then added tone with the cool gray second color (bottom left), which is made up of black, reflex blue and transparent white. The third color (bottom right) is the same tan used in "Fireman."

"Barry White" (Duotone on Strathmore Renewal, Chamois.)

Production Notes Casado wanted to "show paper" on the jewelry highlights, teeth and background. Arsenault noted the faint tone in the upper left of the white background and was concerned that keeping it would mean sacrificing detail elsewhere. He opted to drop it out, commenting, "The jewelry will fall in nicely, but the black printer will need to be overexposed to capture the detail in the jacket, arm and hands. Then we will fill in with the second, red-gray printer so the shadows will have the density they need, while still holding detail. This way, the press people will have more flexibility to run more ink. How much they use will depend on how the paper takes the ink. The paper will make this successful."

There is detail in the clothing that is barely visible in the original (above), but when the black printer (bottom left) is held open, the details come out. The reddish, violet-gray of the second color (bottom right) fills in to capture some of the detail and resembles the tone of the original. This second color is similar to that in "Jackie" and "Chris," and contains black, rubine red, opaque varnish and fluorescent red.

"The Smoker" (Duotone on Strathmore Pastelle, Fluorescent White.)

Production Notes This is an example of how even a straight black-and-white photograph can be given depth with a duotone treatment. The original photograph (at top) has a broad range of tonal values and is much softer than some of the other images. Casado specified a duotone, asking that the white in the cigarette be "paper white" and that the second color should dominate.

Here, too, Arsenault considered suggesting a tritone to bring out more of the midtones. He decided that, since the face jumps off the background and the highlights are well defined, this would work as a duotone. "In fact," said Arsenault, "with the dot gain in the paper, everything fell into place. We didn't need a tritone, as you might have on coated paper. I was amazed at how open I could make this to capture the density and still keep the midtones."

The second color (bottom right) helps define the range of midtones, but the black (bottom left) is needed to break them into more gradations. The cool gray of the second color is made up of black, green, brilliant red and transparent white.

"Chris" (Tritone on Strathmore Pastelle, Fluorescent White.)

Production Notes In this second exercise in high contrast, Casado chose a tritone in order to keep the contrast while holding the detail in the eyes. Arsenault said the eyes would be the most difficult area, but felt that the texture of the face would work well on the fibered paper. The original was toned a reddish purple in the face, and the tritone would preserve that color.

In this tritone, the neutral gray of the second color is the fullest range printer and is made up of the same colors as those found in "Jackie." The third color is a reddish gray that puts some color into the midtones and highlights to make the print more closely resemble the original. "Chris" was more drastically toned in the original than "Jackie," but since both were printed on the same form, Stinehour compromised and went with a subtler look here.

SECRETS OF THE SECOND PHOTOGRAPHER

A review of the camera separation process shows why certain images can be challenging. While every camera operator has a specific technique, Mike Arsenault considers his fairly straightforward.

"Each color and separate tonal range requires a separate shot in the camera. My job is to create or reduce contrast and to anticipate how the dot pattern might be compromised in the plating and printing stages."

First, Arsenault places the photograph on the black copyboard. He attaches a grayscale next to the image to use for reference later. He sizes the photograph according to instructions and sets the exposure according to how each shot is to print. Using a Lanston Monotype camera and a 300-line Polichrom Magenta Positive Square Dot contact screen, he exposes each separation three times, each in a different way.

Three exposures allow him to control the contrast and the depth of the tonal areas. The "main" exposure is made through the screen and gives the photo its overall shape and range of midtones. This exposure is made last in the sequence.

Arsenault actually begins with a "bump" shot of the image, made without a screen. By holding this exposure longer, he can blow away or diminish the dot pattern in the highlight areas. If the original doesn't have much tone in the highlight areas to begin with (see "The Eye"), he might not need a bump shot.

To control the shadows, he makes a "flash" exposure of the screen alone, without the image, which helps control the dot size in the shadow areas. This is particularly important in fighting dot gain on uncoated paper.

Arsenault uses Kodak Kodalith Ortho film, Type 3 (which he finds holds a 300-line screen well), and Kodak Super RT developer. As each piece of film comes out of the final rinse, it is put on the light table for examination under the loupe. He looks at the grayscale to find the midtone dot. Depending on how the film was exposed, the 50 percent dot will move up and down the scale, indicating how much exposure the film received.

Arsenault then examines the highlight areas. Since these appear black on the negative, he looks for dense black so there will be no dot in the brightest highlights. He looks at the shadow end for a certain size dot: The dot must hold up when the ink hits the uncoated paper, so it can't be too small. An application of etching solution can sharpen the dot, bringing it in line with what he wants.

At this stage, knowledge of the paper, the ink colors, and whether the job prints wet trap or dry trap all drive his decisions. He explains, "If the image prints in a bluish gray, it appears harsher. The eye picks up the cool gray differently. I need to compensate for this in the way I handle the highlights. Shadow details can be harder to hold if the paper is textured, so I will adjust the dot size accordingly."

As a further check, Arsenault prints the negative on Dupont Bright Light contact paper. While this will not provide an exact reproduction, it helps him check the shadow end. "The negative can fool you, so it's easier to look at a positive. For the highlights and midtones, I can tell from looking at the dots on the actual film." Such an examination requires the expertise of an experienced camera person. "You can let computers determine the exposure times, but then you stop using your eyes. When the copy is fine photography or art, your own experience can make compensations for the presses the film will run on and how the paper will react.

"For instance, I might overexpose the black to wash it out and open up the details. Then you can run more ink and the second color of a duotone has a chance to show up. You never see details if the black is too dark."

Photo by Jeffrey Norton/Winter Studios

(Continued from page 89)
to a white, unflecked paper.

GOING UNCOATED

Because the fibers in each uncoated stock absorb ink in their own characteristic way, and because each surface responds to light differently, designers such as Casado have learned to anticipate change. If the image is meant primarily to convey an emotion, then uncoated paper works well. If your goal is to convey a mood rather than to show the subject with every detail, you might choose a softer paper because it feels better, even if the photograph won't reproduce as precisely. You play with the balance.

To show some of the effects available, Casado selected two different papers and a set of eight photographs ranging from very light to very dark, from low contrast to high contrast, for the insert. For a fine art look he chose Strathmore Pastelle, Fluorescent White, 80 lb. Text, a stock that feels rather like medium-finish watercolor paper. For softness and warmth, the designer chose Strathmore Renewal, Chamois, a recycled paper with fiber enhancements and a subtle, pale tan tint.

CASADO'S CHECKLIST

According to photographer Casado, you can go wrong any number of ways when you print toned photographs on uncoated stock. He offers this preventive checklist:

1. Start with a wonderful print. While it's possible to work with substandard originals, they can take a great deal of fussing and still not look right. There is no substitute for a beautiful black-and-white image.

2. Use a photograph with good contrast that does not depend on subtle midtones. Grainy photographs can take advantage of a paper's texture, but if you have a good photo, you can work with the lights and shadows to make it work—you have more room to maneuver.

3. Choose a paper that complements the image. On uncoated paper, the main goal is to keep the dark areas of the image open enough in the film and plating stages so that any dot gain (spreading of the ink that fills in between dots, sometimes called "blooming") will be minimal. But you must anticipate the effects of the paper.

4. Working with the printer up front will save time, money and headaches later. Your printer probably knows the presses and papers better than you do, so use his or her expertise: The more detail that can be pinned down early, the better the result will be.

PRESS PROOFS

Since there is no proofing system that will accurately predict dot gain, only when ink hits paper will you get a realistic indication of the image and the effect of the paper and inks you have chosen. So, given the variables of techniques and papers, press proofing is highly recommended. While press proofing can seem like an extravagance, it needn't cost more than a few hundred dollars for duotone work. This is a small part of the whole job cost and can save having to do it over, which would double your cost.

As you evaluate your press proof, keep in mind that when the proof looks weak, that leaves room for dot gain on the press, when the printer can run the job with adequate ink to get the desired density. Some of the most disappointing results occur from simply not running enough ink.

Sometimes, too, on the proof you won't see dot in the highlight areas even when it's there. Then, when the job is on press, it gains in the highlights, which tends to flatten the image.

CAMERA OR SCANNER

In making the decision to generate film by scanner or by camera, the printer takes into consideration the fact that camera dots are softer than dots made on the scanner. However, the scanner does allow for very sophisticated control of dot pattern and density. With a scanned image, for example, one might use software to adjust the quarter-tone without affecting the mid- and three-quarter tones.

According to Rick Stinehour, sales director at Stinehour Press, each method has its particular advantages. Because of the extraordinary talent of the company's camera supervisor, he says, "we prefer to rely on Mike Arsenault's abilities, rather than use the newer scanning techniques, for art and photography work."

PRESSING CONCERNS

A key factor is whether the job will dry trap or wet trap on press. Normally, one ink is laid on top of the next while the first is still wet—wet trap printing. The printer can gain greater control of ink trapping, however, by allowing one ink to dry before printing the next; the second color sits on dry ink instead of absorbing into the paper or mixing with the first ink. The dry color acts as a support for the second, so the dots hold their definition. Dry trap usually produces superior results, but, because of the time needed to dry and re-set up the press, it costs more.

Finally, you must know how you want the final image to appear, and you must communicate it to the printer. Consider the simple matter of cropping. "It sounds very basic," says Arsenault, "but cropping can make a big difference in the way the camera work is done. For instance, if the photograph is to crop across a highlight area with no dot pattern, I would put some tone in anyway to hold an edge. Otherwise, you won't be able to distinguish between the edge of the photograph and the page it's printed on. I have to know if the original is surrounded by a border, or the edge from a Polaroid transfer."

On the preceding pages, together with the original photographs and the final prints, you will see stats of each lithographic negative used to create the duotones and tritones. It should be emphasized that the colors of the plates are process-ink approximations of the actual colored inks used on press. When viewed next to the final printed result, they tell the story of how paper, camera, darkroom, prepress, and press technologies can combine to render monochromatic imagery with a new sense of intimacy. ■

Real World Arts Education

SUNY-Buffalo's advanced illustration students experience the professional side of graphics by working on for-pay jobs with top art directors.

Name That Texan D.J. Stout of *Texas Monthly* magazine chose Sam Giannettino's image of a faceless man as his choice to illustrate a story on the 100 richest Texans. At the sketch stage, Stout advised Giannettino to get rid of the oil wells and concentrate on the man and the cow (see sketch above). From there, the artist searched for visual references for his two figures. He cut out some basic colored paper shapes, mounted them on watercolor board, and then drew into them using pen and ink, watercolor and dyes. The border is yellow gouache. Giannettino went back into the drawing many times, at the last minute wiping out the face and adding an outline of white-out dots. "I'm probably the only person who uses white-out as a medium," he says. He just received his MFA from the program, and plans to look for freelance work and a teaching job. Winning this final competition was a nice send-off. (He has also done assignments for *The Detroit News* and *Ms.*)

By **Elizabeth Licata**

If Alan Cober's Advanced Illustration students had to pick a physical symbol of the no-illusions "Buffalo aesthetic," they couldn't do much better than their own Bethune Hall, headquarters of the State University of New York at Buffalo's Fine Arts Department. Formerly the Buffalo Meter Company, the slightly dilapidated structure is a pure, stark reminder of the heyday of Modernist industrial architecture. Its neat rectangular concrete frame is correctly exposed, while inside high ceilings are lined with the pipes, tracks and pulleys of heavy industry. Like many other facets of the Buffalo urban milieu, a deceptively down-to-earth façade covers up a cutting-edge plethora of cultural riches. Very soon, Bethune will be deposed by a slick new arts facility on the University's suburban Amherst Campus, and there are some who regret abandoning the old site.

But right now the chattering, gesticulating group of art students gathered in the small lounge area couldn't seem more oblivious to their surroundings. With alternating bursts of confidence and despair, these young, aspiring illustrators discuss their current assignment in Advanced Illustration—a "live" competition that will end with one of their drawings being published in *Texas Monthly*, the highly regarded regional magazine. The students are taking the Fine Arts Department's Illustration Option, considered one of the most prestigious illustration programs in the country. It is run by Professor Kathleen Howell, who built the program up from 52 majors to 200 majors in four years, and by Professor Alan Cober, the internationally known illustrator

Ropin' Stout had a difficult time choosing between the illustration on the previous page and Colleen Ayers' more conservative and elegantly rendered piece, which eventually appeared in the magazine as a spot illustration. Ayers' initial sketch (above) is remarkably similar to her finished painting. She did the full-size drawing on a piece of tracing paper, transferred it to board with pastels, and then used a combination of oil, pastel and colored pencil to finish it. She dislikes using pastel exclusively because she finds it muddy. The oil and the pastels create different textures, and the colored pencil fills in the detail.

who has to his credit 17 medals from the Society of Illustrators and the New York Art Directors Club.

The live assignments are just one of the factors that sets the SUNY program apart. As many as nine times a year, Cober contacts an art director from a regional or a national publication and asks them to use a student entry to illustrate one of their articles. The article is sent to Buffalo, the students go to work, and a couple of weeks later, one piece from the submissions of the approximately 20 students who participate is chosen for publication. The winner even gets paid (a little). Not too many art professors have the connections to pull something like this off, but Alan Cober isn't just any art professor. He is a working illustrator who knows all the major players in his field. More importantly, they know—and respect—him.

THE JOB: RICH TEXANS

Cober's students are both challenged and frustrated by their current assignment. *Texas Monthly* has asked them to produce a full-page image to go with its annual feature on the 100 richest people in Texas, and today, art director D.J. Stout has flown up to Buffalo to give an in-person critique of the preliminary sketches. At first glance, illustrating the Texas myth might seem almost too easy. There are plenty of images from which to choose. Ten gallon hats, big cowboy boots, spouting oil wells, monstrous Cadillacs, longhorn steers and bucking broncos are some of the more obvious choices. Even the physical shape of the state of Texas seems absurdly familiar—an icon of the lost frontier. But the class has been forewarned that a fresh and unusual treatment of these symbols is needed for the assignment.

Stout is a little late in arriving at the "crit" session—he's been checking out the Albright-Knox Art Gallery with Howell. When he walks in the door, he is greeted by a wall covered with thumbnail sketches. Many are vivid demonstrations of what happens when Cober's students allow their conceptually trained imaginations to run wild. One student has developed the idea of a highway "road kill," another has portrayed a pipe-smoking cowboy puffing out tiny rich guys, someone else has taken the amusing but unusable theme of a Texas "pissing match." Looking at these initial sketches, Stout seems both amused and surprised: "I'm amazed at what you've been able to do with this very boring subject. There's some really funny things here." But before Stout gives his official critique of the sketches, hé delivers a Texas-style (opinionated and anecdotal) monologue to the class about the history of the "Texas 100" feature.

"This is an idea we stole from the Fortune 500," he confesses. "The interesting thing about it editorially is that when we first did it, we got all this criticism. People complained that it was such a Texas thing to do, that it glorified materialistic values, that we should be covering the everyday people that really make up Texas. So we did an issue where we went around the state and interviewed ordinary people. We called it 'Talking to

Texas.' It was our worst-selling issue for that year. We continue to do this 'Texas 100' issue, and it continues to sell like crazy. People are just intrinsically interested in wealth."

Stout goes on to talk about some of his coups as art director—such as getting photographer William Wegman to put his oft-photographed weimaraner Fay Wray in cowboy boots for a cover story on boots—and deftly connects the individual anecdotes with his overall theme of "embracing the Texas myth."

Stout, a native Texan, obviously embraced the myth a long time ago, and it still seems dear to his heart. "I decided that all that—I mean, cowboy boots, big cars, beautiful women, Mexican food and all that stuff—is what makes *Texas Monthly* such a good magazine," Stout explains. "By assigning the myth, certain artists can make it unique, can really make it different. A lot of illustration is using symbols that everybody knows about. I'm looking for something that gives it that twist, that takes the cliché and makes it interesting."

"I like this wagon-wheel-of-fortune idea," he says to Kirstin Anderson, turning to the first of the groups of sketches awaiting his judgment. "And I like this idea of rich guys hanging around the campfire. Texans like their good old boys up to a certain point." Later, he suggests to Giannettino, "This guy with his leg up on an animal says something. Why don't you work on that, just the guy and the cow."

Stout goes down the line of tacked-up sketches, providing brief but thoughtful commentary for each student, occasionally pausing for input from Cober and the class. "Am I doing this right?" he asks. "If y'all want to speak, go ahead." Stout's casual approach relaxes the class, and soon the crit session becomes an animated cluster, with Cober breaking in every now and then to add his own authoritative pronouncements to the cacophony of voices. When the exhausting, exhilarating session is over, each student is headed in a specific direction. Now they each have concrete ideas to develop for their final products.

Kristen Springfield feels that Stout has been helpful: "He wants me to take out the skyline—I hadn't realized how overdone that was—and stay with the little cowboy with the big hat. I like it because it says, I'm rich, everything I have is big." Most of her classmates are equally satisfied.

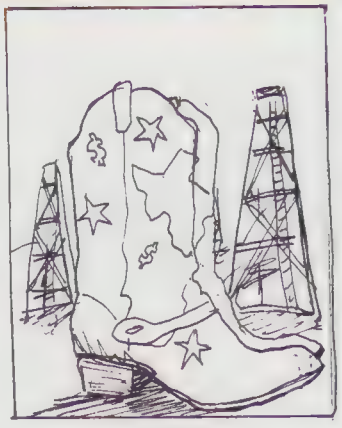
"He offered a lot of good ideas," says another student, Tom Hutchinson. "We get so many different art directors here, and they don't always give good advice."

PROFESSIONAL ADVICE

It isn't often that undergraduate design students have the luxury of comparing professional art directors' reactions to their work, but the students in the Buffalo program can afford to be nonchalant. They have benefitted from roundtable discussions and in-person critique sessions with some of the best creative minds in the country. Such heavyweights as Sue Coe, Milton Glaser, Fred Woodward (Stout's predecessor at *Texas Monthly*) and Brad Holland have visited Buffalo to lecture

The Long Climb Bob Byers did a wide variety of amusing thumbnails like this highly textured lizard (above), but eventually scrapped most of his initial ideas—"I decided I'm going to do what *I* do, rather than worry about expressing clichés." The horse and ladder seemed a subtler way to get at the idea of reaching for wealth. Byers transferred the sketch with tracing paper and then blasted away with pastel, colored pencil, oil for tint, and gold foil for the dollar icon. ("I paid $7 for the stuff and didn't know what to do with it," he says.) The drawing is covered with spray lacquer to give it a consistently solid surface. Byers tries to use as few colors as possible, going for basic light, middle and dark tones, with some highlighting. He is furiously sending mailers out and has gotten a few jobs already.

Money Boots Of the dozen sketches Sandra Guzdek's did, cowboy boots decorated with dollar signs seemed the most promising. Her initial attempt (at right) with oil wells in the background was a bit cluttered, so she removed them and substituted a cactus. (In her final she used a prickly pear cactus instead of a Saguaro cactus, which is not native to Texas.) She also changed the angle of the legs slightly. Like many artists, Guzdek appreciates the forgiving nature of acrylic paints and used several layers with colored pencil for detail. Guzdek intends to plunge into freelancing and is also considering graduate school.



Loaded Tom Hutchinson's original drawing of a Cadillac (at left) grew into a snaked-out stretch limo that worked much better for him compositionally. In a previous job for the *Buffalo News*, he had tried the same concept with a mobile home and liked it. Hutchinson starts drawing with pen and ink and went back into it with watercolor for large areas and colored pencils for small ones. He feels his weakness is in using color and that Cober's class has helped him find his way with it. A BFA graduate, Hutchison has gotten previous live assignments from *Regardies* and the *Boston Globe Magazine*. He intends to continue freelancing as well as look for a full-time job.

or to participate in seminars. Art directors who have assigned work to the class this year include Lucy Bartholomay of the *Boston Globe Magazine*, Barry Fitzgerald of the *Detroit News*, Richard Steadman of *Governing* and Tina Adamek of *Post Graduate Medicine*. Fitzgerald is a former graduate of the SUNY illustration program, an obvious target for outreach and an example of the network of connections that will continue to branch out from this program as the years go by.

Cober isn't at all hesitant to take credit for this extraordinary tie to the professional community: "I know a lot of people and I call on a lot of people. The art directors respect me and I respect them. Milton Glaser came here because I asked him to come here. Sometimes it costs me a favor, but that's OK." Cober is a high-profile illustrator who's done covers for the *Atlantic*, *The New York Times Magazine* and the *Boston Globe Magazine*, as well as regular appearances in countless other magazines and newspapers. A retrospective of his illustrations opened last month at the Katonah Museum. Cober has plenty of leverage when he picks up the phone to ask an art director to take student work. He guarantees the work by promising to do the job himself if the students' pieces aren't good enough, but this has never been necessary.

"I think it's great. At first I was concerned about being in a situation where I would not have anything good to use, but it has never been an issue," recalls Bartholomay, who has been participating in the live assignments for three years. She was also one of several art directors who took turns teaching the class when Cober was away doing a brief stint as the Lamar Dodd Visiting Professor of Art at the University of Georgia.

Bartholomay immensely enjoys the opportunity to work with students. "It's great for the students because they become more invested, but it works both ways—critiqueing work by 15 to 20 students really hones my skills as an art director. When I taught [Cober's] class, I did a hypothetical assignment on illustrating the jeopardization of our Bill of Rights, so it was very intense intellectually, as well as creatively. You see yourself opening a door for them, and once it's open you know it will never close again."

The students get paid a small percentage for the illustrations that are chosen, and the rest goes to the U.B. Foundation Illustration Fund, which helps finance everything from bringing in the Society of Illustrators' traveling show to buying matte board. Cober is quick to point out that, even without the live assignments, SUNY's program would stand out from most others: "In many of the other programs—not all—students will work on maybe two to three assignments in a semester. I give them one assignment a week. If I could, I'd give them two assignments a week, but they have other classes. I get them to the point where they understand what conceptual thinking is, what metaphors are. I want the student to be cognizant of cause and effect, to learn how to think for the image. I also teach them the business: how to write a ledger, how to produce a mailer, how to promote themselves."

Your Money or Your Hat Kristin Springfield had originally included the Dallas skyline in her thumbnail of a little man with a big hat on a big steer (see sketch above), but Stout suggested she pare things down to just one small element and one big element, particularly because the skyline is so overused. After doing the initial drawing in which she exaggerated the size contrasts, she taped down the paper and applied a gel overlay for texture—she uses many layers of the medium depending on how much texture she wants. After the gel dried, she rendered the illustration with oils. Kristin has graduated with a BFA and was a summer intern for the *Buffalo News*. She has six mailers together and intends to "keep bombarding people" until she gets more work.

100 and Counting Jennifer Walk's first tissue sketch (above) contained most of the elements of her final; she knew exactly what she wanted to do even before the crit session. Stout loved the idea of including all 100 Texans, but asked for more personality and detail. So Walk appropriated some faces from her friends and relatives for her final drawing. She painted the illustration with acrylics. Walk is finishing her B.F.A. in the program and is currently too busy building up her portfolio to think about the distant future.

SUNY's program is characterized by a heavy emphasis on basic artistic skills, a point Kathleen Howell insisted on when she designed the program. Howell feels that the students should be trained as artists first, and makes sure they take every drawing and painting course available. She also cites the university's high academic reputation as a bonus for the students: "We think that the academic courses—psychology, English Lit, biology, whatever—are very important. Students need to have interests to bring to the class so they will have some passion and ideas in their art." Like Cober, Howell is a working artist herself who specializes in illustrating junior books (most recently a book of children's poetry called "The Singing Green," by the late poet Eve Merriam).

WINNERS ALL

When the fun and passion die down, however, there is still a pragmatic bottom line to this story. Only one student can win each live competition, and many of the students in Cober's class have never had one of their drawings placed in a publication. "I tell the students that there are many reasons for being picked and many reasons for not being picked and that a lot of it is subjective," Cober says. Cober and Stout agree that it's impossible to predict when editors will get into the act, or when even something so small as a color choice or a physical gesture might turn the tide against an illustration. It's all part of the cut-throat, often heartbreaking process the students will encounter when they enter the field in earnest.

Whether they win the assignments or not, however, these students are establishing a databank of name recognition it would take years to build up on their own. "We've gotten to meet a lot of really well-known people in the field," says David Donati, who had an illustration chosen by Bartholomay.

"It's going to be a huge help for when we get out there," Lisa Cebriski agrees. "I think the art directors will remember us from the class."

A week after the crit session, it's time to send completed camera-ready drawings to Austin, Texas, where D.J. Stout will make his final selection. Just before the drawings are packed up, Sam Giannettino hastily wipes out the face of his rich Texan, and paints some dots around the now blank outline. His amendments meet with mixed reactions: "I think you need a face," one classmate states bluntly. Cober comments on Lisa Cebriski's completed piece: "I still find that drawing weak," he says. "It's still the same guy that we left." Although most of the finals have exact correlation to initial thumbnails, a few students have trashed their original ideas entirely, allowing their instincts to lead them to new ideas.

During a phone conversation soon after his final decision is made, D.J. Stout admits that the assignment was not the ideal one for an illustration class. He would have preferred a smaller, more specific theme, but, because of the real time constraints of getting a magazine out, he had to use the rich Tex-

ans story. "It's a little bit too broad," he says.

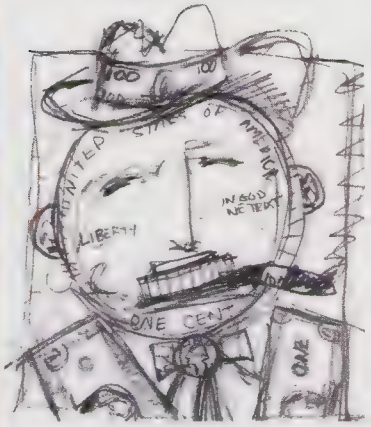
Stout's final choice is Sam Giannettino's drawing of a faceless man with his foot up on a cow, but the decision was difficult to make. "It was a hard choice between two of them: Colleen Ayers' steer/dollar bill roping piece and Sam's," the art director remembers. "Colleen's is definitely more conservative. She used the cliché well; there are nice colors and nice drawings. Sam's is more stylish, more 'out there.'"

The contrast between Stout's two final choices is somewhat startling. Although Ayers' concept is hardly groundbreaking, her technique is elegant and effective. The symbolism found in Giannettino's work is kinkier—almost perverse. A thick-bodied, skinny-armed, faceless Texan stands with his foot up on a cow. The bright colors and trendy artificiality save the image from cruelty, but the drawing still conveys a strong attitude.

Regardless of whether they have won a "live" assignment or not, most of the students in Cober's class seem to be willing to plunge into a career of professional illustration—with all the risks and uncertainty that involves. They are used to having jobs hurled at them just like in the "real world." They have undergone harsh criticism and heavy competition, and they now know how to promote themselves. Most importantly, they have been taught that their images have an intellectual component, that a simple outline can resonate with meaning and metaphor.

Laura Rankin, a full-time artist for the *Buffalo News*, the local daily, took Cober's Advanced Illustration class to broaden her horizons as an illustrator and to meet Cober, who had been "my shining star for 15 years." Although she didn't win a live assignment during the class, last year she published a book called "The Handmade Alphabet," a beautifully illustrated rendition of the manual alphabet for the deaf which won a Notable award from the American Library Association and is on nearly everyone's recommended list. Like many other alumni, including up-and-coming illustrators Scott Swales, Jane Marinsky and Joel Peter Johnson, Rankin comes back to visit the classes, keeping in touch with Cober and Howell.

A few days after the *Texas Monthly* competition, Joe Thiel, a 1988 MFA graduate, called Cober from Baltimore with yet another success story: He has landed a new teaching position as Associate Professor of Illustration at the Ringling School of Art. "The benefit of the program was that it convinced me that I wanted to be an illustrator," says Thiel, whose first professional assignment was with the *Washington Post*. "Without it, I would probably be somewhere pasting up mechanicals. I think teachers should be doing what they teach. Cober doesn't allow you to give anything but your best."■



Money Man Lori Luczak is the gestural expressionist of the class. She made color copies of the different forms of currency that make up her money man—and found out that many copy shops won't do color copies of money, and the rest insist that it be reduced or enlarged. After pasting the collage elements down on illustration board, she painted the image with acrylics. The eagle on the painted quarter which forms the face lent itself nicely to being used for facial features, except for the eyes, which are more color copies. Charcoal was used for the cigar smoke. Luczak has another semester to go for her undergraduate degree and intends to go on to graduate school. "Next semester I will show what I can really do," she says.

Elizabeth Licata is a Buffalo, N.Y.-based freelance writer who specializes in the arts.

Specialty CD Packaging

Margo Chase uses Photoshop to design a Grammy-nominated CD package, complete with "tarot cards," for Cher's most recent album.

By Greg Hofmann

In any highly competitive market, the client is always looking for an edge. Among record companies, the struggle for airplay and sales is notoriously fierce, and the latest weapon in the war is the specialty CD package.

Typically manufactured in small batches of 500 to 1,000 units, the specialty CD package is targeted at people who can do an album the most good—radio DJs and record store buyers—in hopes of making a particular album stand out from the herd. Even stars with an established following want to ensure a strong "launch" for a new album.

When Geffen recording star Cher contacted Los Angeles-based designer Margo Chase, it was to design the cover of her forthcoming release. Cher had seen Chase's work on other albums and felt an affinity for her style. But this straightforward cover assignment would snowball into a project that would push Chase's computer-assisted photomontage techniques to the limits. The result was a package that won the 1991 Microtek Design Contest and would eventually garner Chase a Grammy nomination.

For Chase, specialty CD packages present a unique design opportunity. "Special packages are wonderful because you have a chance to work on a box, or a fold-out insert. Unusual packaging is becoming more common, I think, because the jewel box format is so confining. It's hard for record labels to get attention for new acts without doing something special. PR CD's, as they're called, have become an important marketing tool for the record companies."

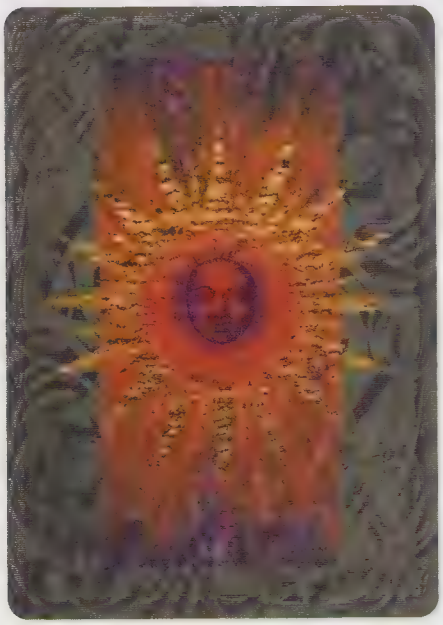
MOTIF AND LEITMOTIF

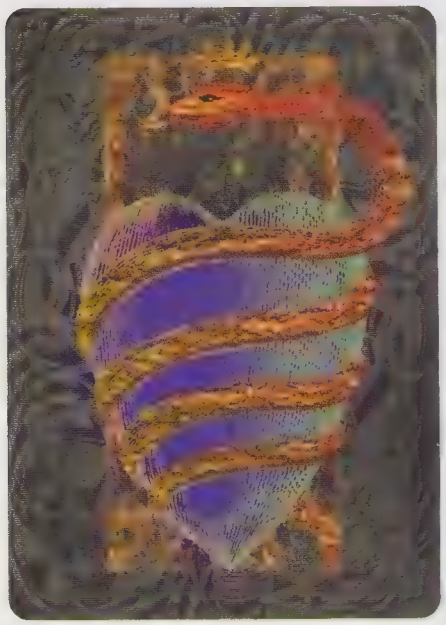
As Chase explains, the graphic themes for the original assignment—the cover design—were built entirely around two words: "We started with the album title, 'Love Hurts.' Cher had a strong feeling that it should be about opposites: love and pain, good and evil, the two sides of a relationship. She wanted to do something where she could be the good queen and the bad queen. It sounded like playing cards, like tarot, to me. We talked about imagery and the ways to do the tarot theme as a piece of art for the cover."

The first idea was to do a full photo session, posing Cher in two different costumes and then sandwiching the new images together, like the top and bottom halves of a playing card queen. But it was soon clear that Cher was simply too busy to schedule such a session, and Chase was thrown on her own resources. Although she had owned her Mac system only four months—at that time, a Mac IIci, 19-inch Radius color monitor, Microtek 300Z flatbed scanner, Apple Laserwriter II NTX printer, and Wacom tablet—she decided that a photomontage would be the way around the problem: Simply blend a photo of Cher's face

Photo above by David Provost

CD Cover and Cards The specialty CD package has become an important marketing tool in the music industry. Designer Margo Chase created a limited-edition boxed CD package (opposite) for pop superstar Cher's most recent album, "Love Hurts." The image created for the CD cover (top right) is a complex composite created in Photoshop. It became the basis for a set of tarot-like cards (top left and below) that were included in the package.





1 To create a rough comp, Chase scanned in a photo of Cher, then added wings and a background texture in Photoshop, using the techniques she would later perfect in the production of final art. When Cher saw what was possible with electronic photomontage, the project snowballed.

2 Because Cher was unavailable for a photo shoot, Chase had photographer Merlyn Rosenberg shoot a body double, matching the lighting and pose to an original photo of Cher. Chase scanned these photos into her computer to create final art.

into a body model photo.

This would be Chase's first major design job in Photoshop. By the time she was finished, she had put herself through a graduate-degree program in digital photographic manipulation. Chase relied heavily on the expertise of her Mac trainer, James Bradley: "I didn't know the program well enough to take this job—James stayed up late many nights helping me get the program to do what I wanted." The designer also learned how memory-hungry graphics files can be, and soon had to rent a 300-megabyte hard disk to hold the complex images she was generating.

THE SNOWBALL

Chase put together a comp of her playing-card idea ❶. "I scanned in a picture of Cher in low res, did a test print, and took it over to her. She said 'Great—this is what I want.' But when she saw the images I'd scanned and put into the comp, she really got into it: 'You mean you can put anything you want in the picture?' Then it was crowns and scrolls and snakes. We talked about the imagery, and it started to snowball."

Chase called photographer Merlyn Rosenberg and ordered up a complete photo session (Rosenberg also shot all the other objects that were scanned in as photos) and shot a body model in costume as a foundation for the image. Rosenberg used a face shot of Cher as a guide to the lighting and the pose, then shot the model in front of various backgrounds ❷.

Chase was well into her cover design when Samantha Hart, head of merchandising at Geffen Records, informed her that the company wanted to do a special promotional package for the album. It was at this point that Chase suggested she develop the tarot theme into an actual deck of cards, with tarot-like imagery on one side and the lyrics to each song on the other. Hart suggested a wooden box for the

package and began researching the sizes and shapes available. During the next phone call, Chase was given a budget and a deadline.

Says Chase, "My first idea wasn't nearly as elaborate as what we finally produced. I thought of a little line art icon on the back of each card—I wasn't thinking of four-color illustrations. Once I got into working in Photoshop, I saw it wasn't that hard to do, and I thought of doing a different color image for each card. It ended up taking a lot of time, but I'm glad we did it."

SUPERSTAR AS CLIENT

While it's not unheard of for a designer to be working directly with the recording artist, it is not the usual relationship. (Refer to the sidebar, "CD Tips & Techniques.") For most of her early album cover assignments, Chase was hired as a freelancer by the record label's art director. She would work with the AD, and the AD would deal with the recording artist. "In a way, that was good, because I was dealing with only one person, someone who understood what I was doing and who could use my vocabulary. Dealing with the artist can be a bit more difficult. In this case, I was between Cher and the record company. On the one hand, the marketing people have all these expectations—it has to be done on time, within budget, they want a photo of the artist on the cover, and so on. But Cher doesn't care what it costs or when it gets done, she just wants what she wants. It gets pretty convoluted. But it was nice for me in that I could present my point of view straight to the artist."

The imagery for the cards was generated in an ongoing dialogue between designer and client. The two would meet, then Chase would comp up her layout ideas by hand, using pencil and photocopies to create rough thumbnails ❸. Her goal was to show the meaning of the song on each card, and at the same time carry a thematic unity through all of the images. Says Chase, "Cher never saw the final artwork. She signed off on the thumbnails, my black-and-white hand drawings. She'd approve the idea, and then I'd go do them. She liked the end result a lot—she bought 100 of the boxes herself."

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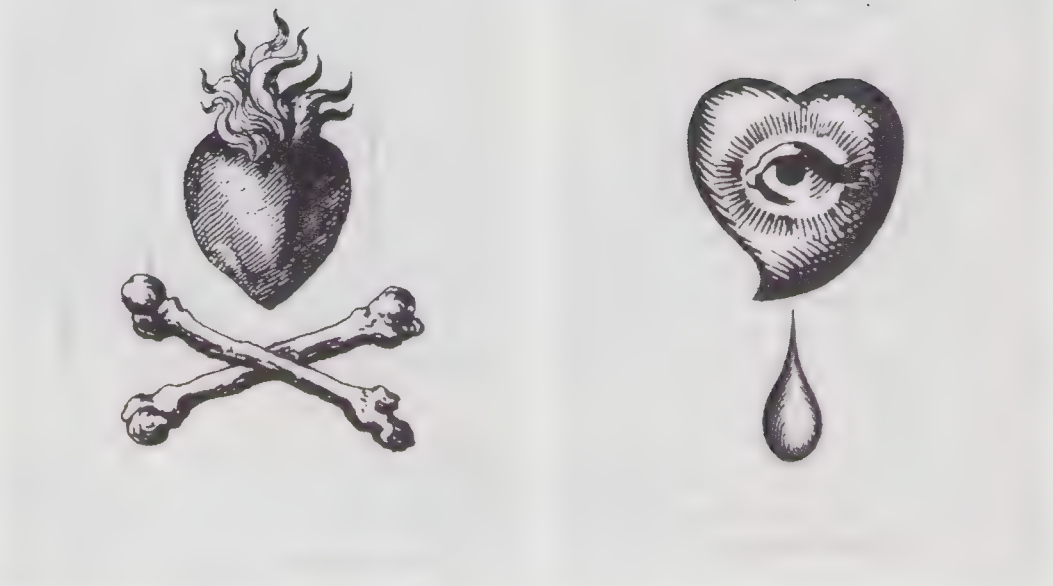

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❺

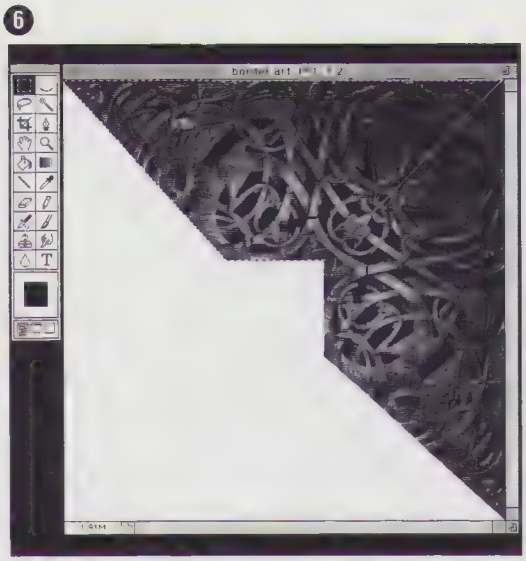
3 Chase assembled these photocopy-and-pencil thumbnails from art she scanned out of her trove of line art resource materials. Cher signed off on the concept, and Chase then created four-color art.

4 As a foundation for the album cover art, designer Chase started with a black-and-white photo of a wood carving on an old Norwegian church. The photo of the carving was first scanned as a grayscale TIFF file, using the desk accessory that came with the scanner. (Chase did the scanning on a network, and Photoshop will not scan remotely.) The image was cropped, and the Despeckle filter was used to remove any moiré patterns that arose in the scanning process. Chase then used the Image: Adjust Levels command to add contrast to the scanned image and saved the file.

5 Chase drew a beveled shape with the pen tool, made this shape the selection, and copied it onto the clipboard.

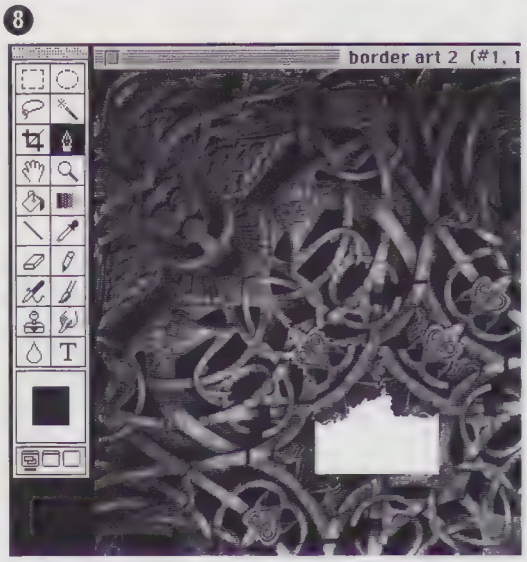
COVER STORY

But, even before the specialty



6 After creating a new, square file, Chase pasted the selection into it and moved it to one edge. She then pasted the selection again and used Image: Flip Horizontal, rotated the shape 90 degrees clockwise and moved the floating section into place. She used the rubber stamp tool to soften the seam between the selections.

7 Chase used the pen tool to draw a diagonal line from one corner to the opposite to create a triangular selection, then used the Copy, Paste, Flip Horizontal and Rotate 90 CCW functions, moved the new selection into position, dropped it and again retouched the seam with the rubber stamp tool.



8 To fill in the center of the background art, Chase used the lasso tool to grab a segment of the existing art, held down the Option key and dragged a copy of the segment into position in the center. With the art still selected, she used Option to create another copy, then used Rotate 90 CCW and moved the rotated copy into position in the next corner. Repeating this process, Chase filled in the center gap and again used the rubber stamp tool to soften the seams and fill in any minute gaps.

9 When the grayscale border art was fully assembled, Chase colorized it by changing the mode to RGB. Under Image: Adjust Hue and Saturation, she checked the box called Colorize and moved the sliders to get the green tone. She also shifted the highlights toward green and the shadows toward blue with the Image: Adjust Color Balance controls.

package had been conceived, Chase had an album cover to design. The process was rife with feedback loops: At the same time she was showing thumbnails of the cover to Cher, Chase was also dealing with the record company, keeping Geffen AD Robin Sloan up to date on the project. She recalls, "All told, I probably made three presentations to the art director. First Cher and I would go over the thumbnails, and she'd suggest changes which might take me two weeks to do. I'd call Geffen and tell them about the added time and money, and they'd call her manager, then the manager would call Cher and say they can't spend all that money, and Cher would say, 'I don't care.' And all of this would filter back to me."

The cover, as built up in Photoshop, was composed of several layers. The rich, green-toned carving that serves as the backdrop for all of the art started out as a small segment of a black-and-white photo from one of the books in Chase's collection of reference materials, in this case a photo of a wood carving on a Norwegian church ❹.

To build the background, Chase scanned in the photo, selected out one section, copied it and rearranged the pieces until she had built a square. This copying and flopping process accounts for the strange implied perspective of the background, which seems to be receding in all directions ❺,❻,❼.

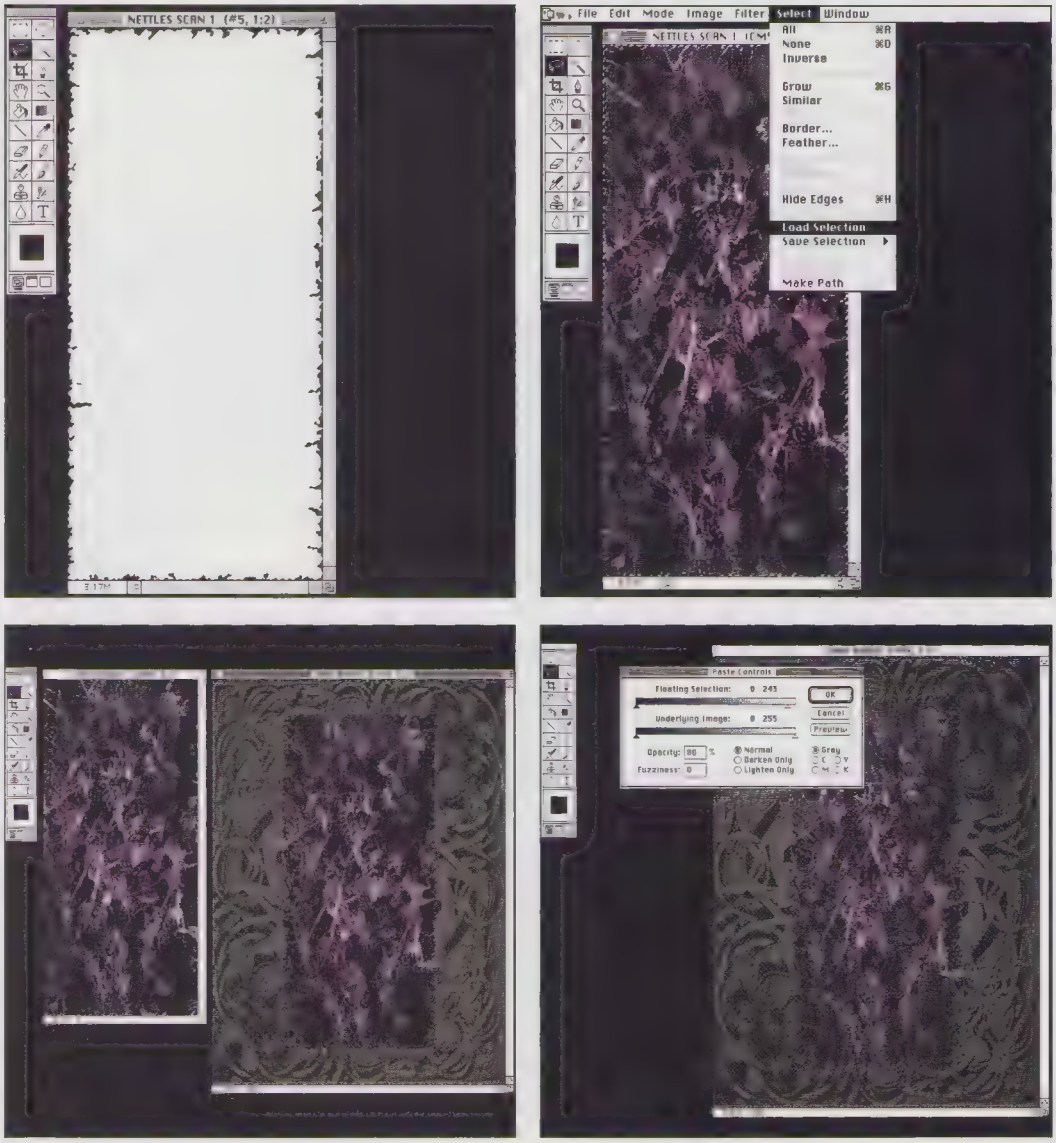
Chase had to "fudge" the center of this image, cutting and pasting little pieces from the whole to make the various filigrees of the composite match up along the center axis ❽. With the background square completed, the designer went on to develop the image in several different formats: square for the CD booklet front and tall for other applications in the CD specialty package—a mini tarot deck and stamped wooden box.

Continued on page 117

10

10 To create a backdrop for the Bad Queen, Chase used Photoshop to create a mask layer. She started by scanning in a photo of nettles as a grayscale TIFF file, imported the image into Photoshop and added contrast with the Image: Adjust Levels controls. The Image Size dialog box let Chase reproportion the image to the correct dimensions to fit into the center of the border art. Chase colorized the nettles by changing the mode to RGB using the Image: Adjust Hue/Saturation controls, checking the Colorize box and moving the sliders until she had created a violet tone that she liked.

11



11 To make a mask for the rough-edged shape, Chase used the New Channel mode. *Tip: By making the mask a separate channel, Chase could save it for use on the other cards.* She then used the lasso tool to draw the rough-edged shape around the outside of the mask layer. She filled the selection with black and used Image: Map Invert to create the final mask (top left). Using the Load Selection command, she then selected the mask shape out of the nettles image (top right), then copied this selection and pasted it into the "Tarot Border" file (bottom left). Using the Paste Controls (found under Edit), she adjusted the opacity of the image to 80 percent and moved the top slider left to make the white highlights (bottom right).

A RECORD OF SUCCESS

Margo Chase began her design career as a biology major at California Polytechnic State College in San Luis Obispo. She had drawn since childhood and was taking elective art courses. A course in illustration pointed her in the general direction of design. So, after graduation, she hoped to combine her interests by doing graduate work in medical illustration. It was at this point she realized that design was her real interest, but with a portfolio of medical illustrations, none of the design firms knew quite what to do with her.

In 1981 she moved to Los Angeles and got her first design job in an agency that specialized in plain-wrap package design—in her words, "the worst." Her next job was designing tour books, which at least gave her experience doing layout and designing titles and logos.

When the company was sold in 1983, Chase struck out on her own as a freelance logo designer. She comped up a portfolio of logos and went six months without work. Her break came in the form of a job for Warner Bros. Records, which soon led to more jobs in the record industry, almost all of them designing album titles and band logos. An ad in the *Workbook* led to agency work, good work led to more work, and the jobs started rolling in.

Chase now employs two full-time designers at two Macintosh-based graphic stations and brings in part-time help when things get busy. About 70 percent of her jobs are for record, video and film companies, and she has begun branching out into package design and fashion work.

Chase Creations This Geffen release of the heavy metal band, I Napoleon, is actually a 3-D carving in plaster (left). (Photo by Michele Clement.) Top, a comp for a CD sleeve for the Geffen label. The sleeves are used, for example, to send a package of CDs to radio disc jockeys. (A.D.: Margo Chase, Designer: Alan Disparte.) For this Virgin Records release (above), Chase art directed photographer Robert Lobetta and Nancy Ogami, who did the calligraphy.

Bio photo by Merlyn Rosenberg

12 From her reference materials, Chase chose images that would carry forward the dual themes of love and pain, including a detail of Caravaggio's Medusa. These images were scanned in as grayscale TIFF files, then colorized in Photoshop. Other photographic reference Chase used in the imagery included the skull for the Bad Queen's crown, bird wings for the Good Queen and wire-reinforced ribbon used as background for the lettering.

13 The line art collage from Figure 3 was scanned into Photoshop as a TIFF file. The scan was opened in Photoshop and converted to grayscale for cropping and clean-up. This image was then copied and pasted into a new channel in the Tarot Art file.

14 When the image was scaled and positioned, Chased used Image: Calculate Duplicate to copy the line art image to a second channel in exactly the same position. She then used the lasso tool to select and delete the heart, leaving only the flames. At this point she used the Subtract function on the two positive images—heart and heart plus flames—which resulted in a negative (white-on-black) mask of the heart.

Continued from page 114

Once the background had been blended into a whole, Chase began colorizing it. She first converted the grayscale image to the RGB color format, then used Photoshop's Image Adjust controls to colorize it and to adjust the saturation and density scales.

To enrich the highlights and shadows, Chase went into the Color Balance controls and sent the highlights more to the green, the shadows more to the blue, which made the image more dimensional, both spatially and chromatically ❾.

ADDING TEXTURES

To maintain the "duality" theme that would permeate the project, Chase created two additional textures in gold and purple that would form the next layer of background. The gold would be placed behind the good queen, the purple behind the bad one. Says Chase, "The two backgrounds were decayed so much that you can no longer tell what they are. One was a photo of thorns and nettles, the other was a photo of leaves with flowers, but they ended up as two different textures. The idea was, behind one image would be leaves, behind the other would be thorns."

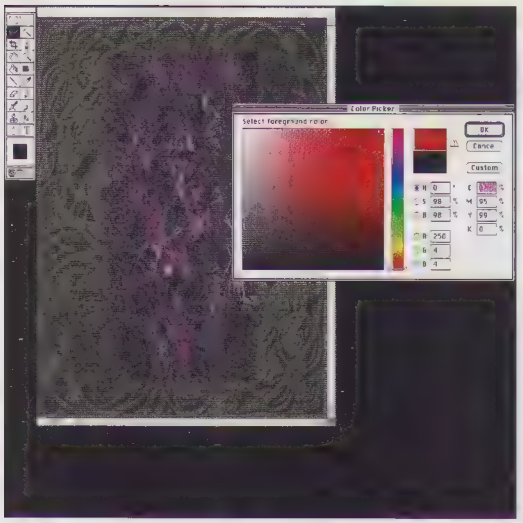
For the leaves, she scanned in a black-and-white photograph and colorized it in much the same way as the church carving. She then made a new mask for the shape—a rough-edged square meant to suggest parchment, which she created with Photoshop's selection tools. She made the mask the selection, then copied the leaf image onto the clipboard and used the Paste Into command to get the leaves into the parchment shape over the background; she performed the same transformations on the

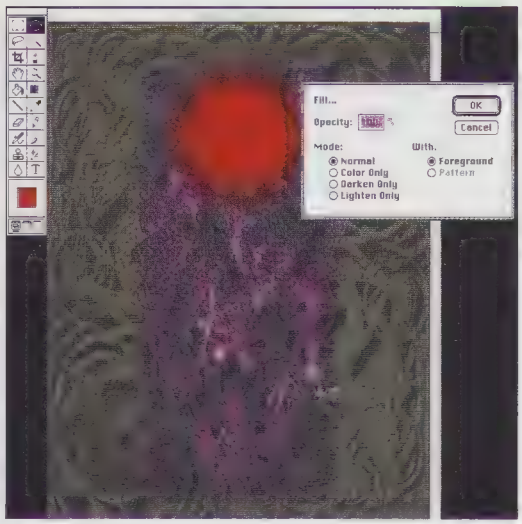
15

15 Chase inverted the flames channel to make a negative mask, then loaded the selection into the main RGB channel of the file. Using the oval selection, she drew a circle around the flames area, then used the Feather command (set at 30 pixels) to add the vignette or glow effect.

16 From the Color Picker dialog box, Chase chose a deep red for the glow (left), then under the Edit menu chose Fill and selected 100 percent opacity (right). The process was repeated to create the glow behind the heart shape.

16





lower half of the image with the thorns ❿, ⓫.

Using Photoshop's Paste controls, Chase adjusted the sliders for opacity to allow more or less of these background images to come through. "If you play with those," explains Chase, "you can get a peeled, decrepit effect, in which the highlight areas drop out. I used that technique a lot in this project. The beauty of it is that it creates a kind of accidental texture that doesn't feel stiff."

This technique also gives the images a "hand-crafted" quality that is very important to Chase: "The problem with a computer, in my opinion, is that it has a tendency to make everything perfect. You can end up with something pasted together in layers that look so clean, with one perfect thing on top of another, but they don't look or feel integrated. This technique let me put the images together so that they look like one integrated piece of art."

RIVAL QUEENS

The double images of Cher as Good Queen and Bad Queen are highly refined composites. A slide of the performer's face was scanned in by Electric Pencil, a service bureau in Los Angeles, and the photo of the body model was scanned in from a color print; then the two were combined in Photoshop.

Probably the most difficult part in creating these composite images was matching skin tones. If you look closely, you can see that the tone of the face is slightly warmer than that of the arm, yet the tone of the face matches that of the neck and shoulders of the model almost exactly. "I had a lot of trouble matching the skin tone of the model to Cher," Chase explains. "We tried very hard to match the lighting of the shot of Cher to the lighting at the photo session. I stood there with a little 35 mm transparency and had them move the lights around until we were as close as we could get. It was tough. Fortunately, the image was a little soft, so I could get away with more. I'm not really a retoucher, but now I have a real appreciation for what professional retouchers do."

To create the Bad Queen image, Chase pasted Cher's face onto the body model in a separate file, then did all the retouching and color corrections to that file before cutting out the assembled figure with the lasso tool and pasting it into the thorn background file. All the details—crown, wings, snakes, claws, and so on—were pasted onto the assembled figure after it was in the thorn background.

For the bat wings in the Bad Queen image, Chase scanned a photo of a gargoyle from reference material, cut out the wings, and colorized them. The claw comes from another gargoyle in the same reference.

The jeweled crown of the Good Queen was photographed on the body model, clipped out, and placed on Cher's head. (Refer to ❷.) A photo of a skull was then scanned in, radically reduced, and pasted over the jewels to make the Bad Queen's crown. Then the snakes were added. They started as a black-and-white scan of a detail from Caravaggio's Medusa ⓬. But by the time Chase finished them, they bore little resemblance to the original: "The snakes don't look much like that in the painting. I put them in amongst the hair, then did a lot of pasting and changing of colors to make them look more disgusting."

Once the Bad Queen was completed, the entire assembly of Queen and thorn background was pasted into the green carved border.

All these techniques were used again, with different imagery, to create the Good Queen. To cover the join between the upper and lower images, Chase scanned in a piece of wire-reinforced ribbon which she had bent to the actual shape shown

on the card, pasted this in over the join, and added the lettering. (See ⓬.) The album cover was all but completed. (Refer to the opening photos.)

NEW DEAL

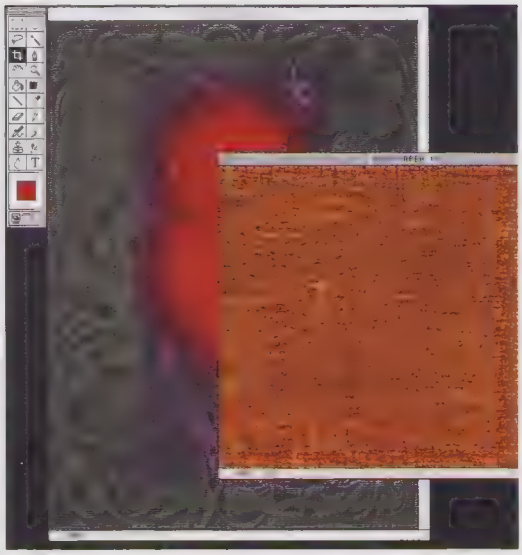
For the specialty packaging, Chase created the entire suite of 12, four-color cards almost entirely in Photoshop, starting with raw images—photographs or line art—that she scanned into her Mac on a flatbed scanner. "I have a huge trove of books," says Chase. "I collect books on symbols and iconography and heraldry. I thought of all the associations of love and pain and pulled out a series of symbols. My designer, Nancy Ogami, made copies of the artwork, and then redrew the images according to my thumbnails using these photocopies. I'd scan these into the computer as black-and-white TIFF files. That was my starting point in Photoshop."

To give all the cards a consistent look, the two textures of leaves and thorns from the cover were used to create two contrasting sets of cards within the mini-deck. The next layer on each card held the icons themselves, which for the most part started as line art. We will look at one card to explore Chase's montage techniques.

The heart with flames started as a black-and-white image that was scanned in and pasted into an alpha channel to become a mask in the Photoshop Tarot Art file ⓭. Chase cut the flames away with the lasso tool and put the flames in one channel, the heart in another ⓮. She inverted the flames channel to make it a negative mask, and then loaded the selection into the RGB channel. She selected a circular area just a little bigger than the flames ⓯. Then she feathered in a warm red to the circular shape, so that the color vignettes out and creates a glowing effect ⓰.

She made a similar glow for the heart: With the selection tool, she created several ovals in the general shape of the heart

⓱

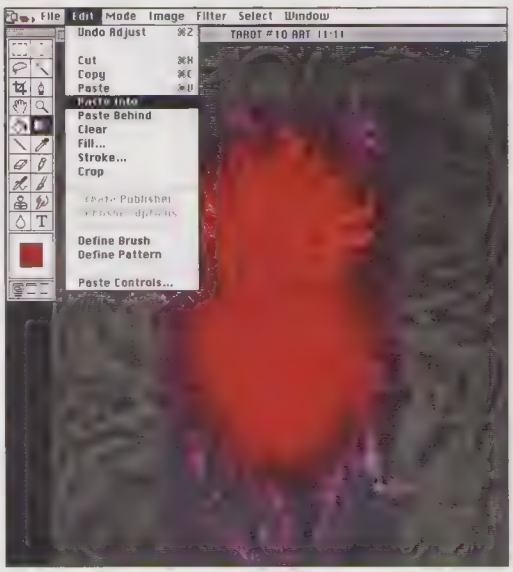


17 Chase scanned gold paper as a color TIFF, opened the scan in Photoshop and added contrast with Image: Adjust Levels (top left). On a new channel she used the blend tool to make a blend from black to white (left center). Loading the new channel as the selection on the gold paper file, Chase filled the selection using the Color Only button in the Fill dialog box, with a dark copper color chosen from the color picker (below).

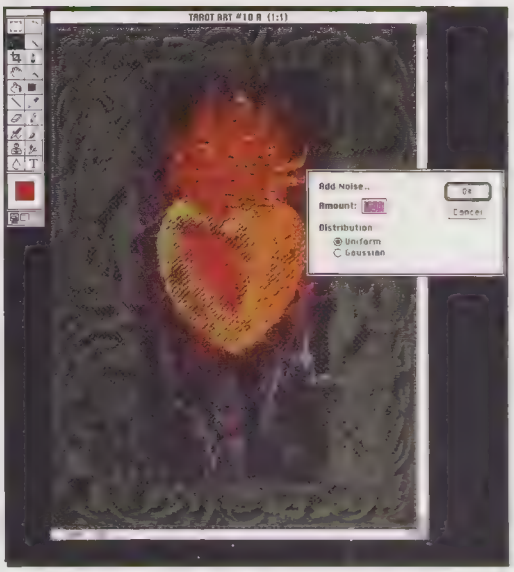
18 She then loaded the flames channel onto the Tarot Art file, copied the gold paper, and used Paste Into to fill the flames with the graduated color.

19 Chase made a new file and filled it with a pale green. In a new channel she created a horizontal blend, loaded this selection and filled it with dark peach to create a fill that blends from green to peach. In the Tarot Art file she loaded the heart channel. Then she copied the blend and pasted it inside the heart. To texture the heart, she used Add Noise three times on the default setting.

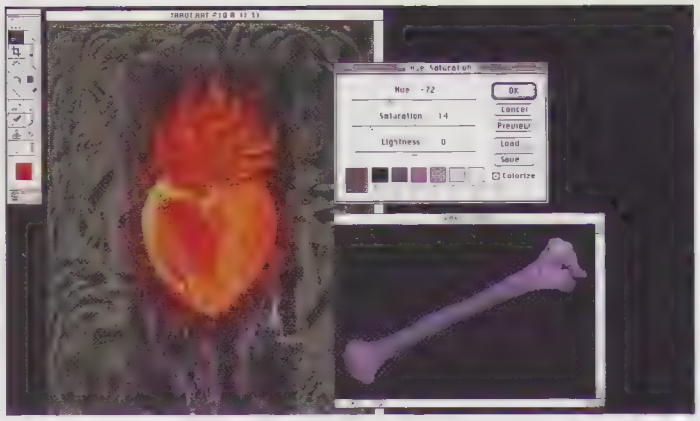
⓲



⓳



20 Chase scanned in a color photo of a bone as a grayscale TIFF, opened it in Photoshop and increased the contrast. She then cropped and rotated the image to the desired angle, converted it to RGB and colorized it by moving the hue slider to purple and the saturation slider left, to make the tint more subtle.



CD TIPS & TECHNIQUES

After years of working for the recording industry, Margo Chase offers these observations about the possibilities and constraints involved in designing CD and record album covers:

- The long box, still in use in the U.S., is probably on the way out. "For me, the CD format was a drag when it came out. We album cover designers didn't have twelve inches to work with anymore. In the United States we still have the long box, but this package is probably not long for this world."
- The logo for any CD design has to be clean and legible, and the artwork has to be more graphic than on a record label. "A lot of record company people have come to the determination that the only thing that will work is a picture of the artist's face, and a logo that you can read, and that's it. We designers get tired of doing that, but unfortunately you don't have a choice sometimes, so you do the best you can with it."
- A CD design can be integral to marketing. "We did a cover for a band who wanted something very graphic, with an icon that they could use for other things. We came up with a graphic snake image, and now they use the snake logo in their video and in their press kit. That's fun for me, because I can feel that the design is an integral part of the marketing for the project."
- Seeming limitations should be looked at as possibilities. "Sometimes the label will come to me with just general ideas, sometimes they don't come with anything. Other times they will insist on an artist shot. Sometimes we'll be given shots from a photo session, and we just choose the shot and comp up a cover and get approval. If I get photos that I think are bad, I'll come back to them and pitch other possibilities, more conceptual approaches. Other times I'll get to do the photo session. A lot of it depends on the budget."
- CD booklets can be an outlet for your creativity. "In the booklet you can play with the type, with art inside, or photos, and there are various formats you can use—they're not all just stapled together in that size. If the insert unfolds, you can play with what happens as it unfolds, the relationships between spreads, so it's a more interesting design problem."
- The danger of specialization is repetition. "Now that I've done so many booklets, I know what's possible, so it's a struggle for me to keep looking at it as a new problem and not something that I already know how to do. Otherwise it can look like a previous design."
- Working with the artist can be rewarding, but recording industry executives can often be an asset to the designer. "Usually the designer is hired by a record label, not by the artist. That, as an introduction to the field, can be good, because the person you're dealing with at the label is already experienced in the process and will mediate between you and the client and tell you what they do and don't want. In my experience, usually the good ideas come from the label and the bad ones come from the artist. But not always. Jody Watley has great taste, and she and I were trying to convince the marketing people that we had the best concept for her album. Marketing has its own point of view about what the audience is and what will work, so sometimes working with the artist can be more rewarding."

art, joined the ovals into a single shape, feathered it and used this shape as a mask, which she filled with red.

Next she added color and texture to the flames. The artist first scanned in some crinkled gold paper on the flatbed scanner and used the Contrast controls to make the texture "crinklier." ⓱ She then loaded the flame selection into the RGB channel and pasted in the gold-colored texture ⓲. Then she loaded the heart from the alpha channel, which placed it over the red, and filled it with a blend that went from a pale green on the left to a gold-green on the right. She used the Add Noise filter to give it a fine speckled texture, and modified it so the red showed through as an added texture within the heart ⓳.

The final element in this image is a pair of crossed bones beneath the heart. Chase had Merlyn Rosenberg photograph a single bone, then scanned in the color photograph as a halftone. In Photoshop she toned the grayscale image with a dead blue, then duplicated and flopped it to make the crossed bones ⓴, ㉑, ㉒.

TYPOGRAPHY

On the reverse of each card are the lyrics to one of the songs, laid out in opposing triangle shapes. The album logo—a stylized heart surmounted by a crown—is placed in opposite corners, to carry out the playing card theme. The heart was created by taking the "C" in the "Cher" logotype, modifying the shape and mirroring it.

Chase created the logotype in Illustrator, starting from a pencil sketch. "I always draw things first," she notes. "I can't think on the computer very well, and I'm still hooked into my fingers. The pencil sketch was scanned in as a PICT file and traced in Illustrator. I don't use autotrace. I basically draw each letter in the program, over the top of the scan. Autotrace can end up being more work, be-

21

22

21 To remove the black background from the photo of the bone, Chase used the magic wand tool to select all the black areas, then chose Select: Inverse to switch the selection to the bone only. She then pasted it into the Tarot Art file (top left). Using the Paste Controls, she moved the top slider to make the bone "decay" in the highlighted areas (top right). Holding down the Option key, she dragged a copy of the bone slightly to one side, then chose Image: Flip Horizontal to get a crossed copy of the bone and finally moved it into position (bottom left).

22 Ever mindful of the duality theme, Chase chose two typefaces—a calligraphic face, Duc De Berry, and an uncial style, Omnia, both from Adobe—for the reverse side of the tarot cards. She chose a diamond shape for the type layout to preserve a top-to-bottom symmetry consistent with a playing card.

cause it gives you all these handles in places you don't want them, and you spend more time eliminating the extra handles than you do tracing it by hand."

Two typefaces were used for the lyrics (the "duality" theme again). Because the diamond-shaped layout prevented normal line breaks, dingbats were used to separate the lines of the song. Due to time constraints, Chase had the type set by a service bureau, Cliff Typographers.

"The typesetting was fun," says Chase. "All the lyrics and credits were laid out in a diamond shape—like the suit of playing cards—and it was a hard sell convincing the label people that it would be a good idea. It was a lot of work for the typesetters, but I'm glad we went with it. I get very absorbed in trying to carry the theme through every part of a project—that's the fun part. But it can be horrible when they ask for changes."

THE FINAL DETAILS

The lion's share of the work on the box that would hold all this design work was done by Geffen marketing head Samantha Hart, who did extensive research among wood box fabricators to find out what was possible and at what price.

Hart's next project was to find a company that could foil-stamp the top of the box, and a printer that could print the interior cardboard assembly that would hold the cards and CD, and then assemble it into the box—all hand-work. Along the way came inevitable compromises: Originally the boxes were to be stained green, but that turned out to be prohibitively expensive. In addition, Chase had asked for copper and green foil, but when no one had green, they went with purple.

Even with the revisions, the compromises, the complicated relationship between recording artist, designer and record label, Chase managed to design the entire album package—specialty box, 12 playing cards, CD sleeve, CD liner, and graphics for the CD itself—on time and on budget. How long did it take? "It was perhaps three weeks from the first phone call to the final mechanicals." But, there was, of course, a price to be paid: "I did nothing else but this one project. I just didn't sleep or go anywhere." A high price, says the artist, but well worth it. ■

Greg Hofmann is editor of Step-by-Step Graphics.

Trajanus: What's New in Oldstyles

This elusive face provides a fresh design alternative to specifying more dog-eared oldstyles.

By Allan Haley

A Classic Face Margo Chase, principal of Margo Chase Design, used Trajanus to create the design for the CD cover and packaging shown on this spread. The Eagles cover employs the typeface's extended caps and lowercase italic. "[Trajanus] has a wonderful, classic, roman form that is not too thin and not too thick," she explains. (For more of Chase's work, see "Specialty CD Packaging," on page 110.)

It's almost a natural attraction, like birds to a clean automobile, or politicians to a parade; graphic designers have always seemed to gravitate to oldstyle typeface designs.

Individual typeface choices have changed over the years, but an oldstyle typeface design almost always leads the typographic hit parade. In the early part of this century, Benton's Cloister Oldstyle was the face designers specified; a few years later Goudy Old Style became the typeface of choice. For a time Bruce Roger's Centaur was the hot design, then it was Hermann Zapf's Palatino®, and more recently faces like Bauer Text and Kennerley have been used to set award-winning graphics.

One oldstyle design, however, has never been the graphic designer's first or even second choice. Trajanus, the subject of this "ABCs" article, is sort of the "short skinny kid" among oldstyle types, the last choice when it comes to choosing up teams. Although the design has been around for more than 50 years, it has never reached the status of a first-string player.

ATTRIBUTES

There are serif types which can be categorized or classified simply as Modern, Transitional, Clarendon or Slab Serif. When it comes to oldstyle designs (because there are so many and because they are so popular) there are a variety of "sub categories" to the main stylistic heading. Trajanus, for example, is officially classified as a Venetian or Italian Oldstyle design. These oldstyle typefaces were originally created between the late 15th and mid-16th century in northern Italy. They are some of the first, and among the most calligraphic of the roman types. The axis of their curved stroke is normally inclined to the left as if they were drawn with a flat-tipped pen or brush, serifs are somewhat free-flowing and heavily bracketed, descenders are usually short, and contrast in stroke weight is not dramatic.

Trajanus has all the classic Italian oldstyle character traits and then some. It is more calligraphic in nature and has more of a marked pen-drawn quality than faces like Palatino or Goudy Oldstyle. It is more roughhewn than either Goudy's Kennerley or Benton's Cloister, and is generally heavier in weight than most of the other, better known, Italian oldstyle designs.

Rugged But Handsome Although individual letters might be called "quirky" or just plain unattractive, Trajanus, like Caslon, is generally considered a handsome design when viewed as a block of copy. Ascenders are tall and elegant and serve as a strong counterpoint to the otherwise almost rustic

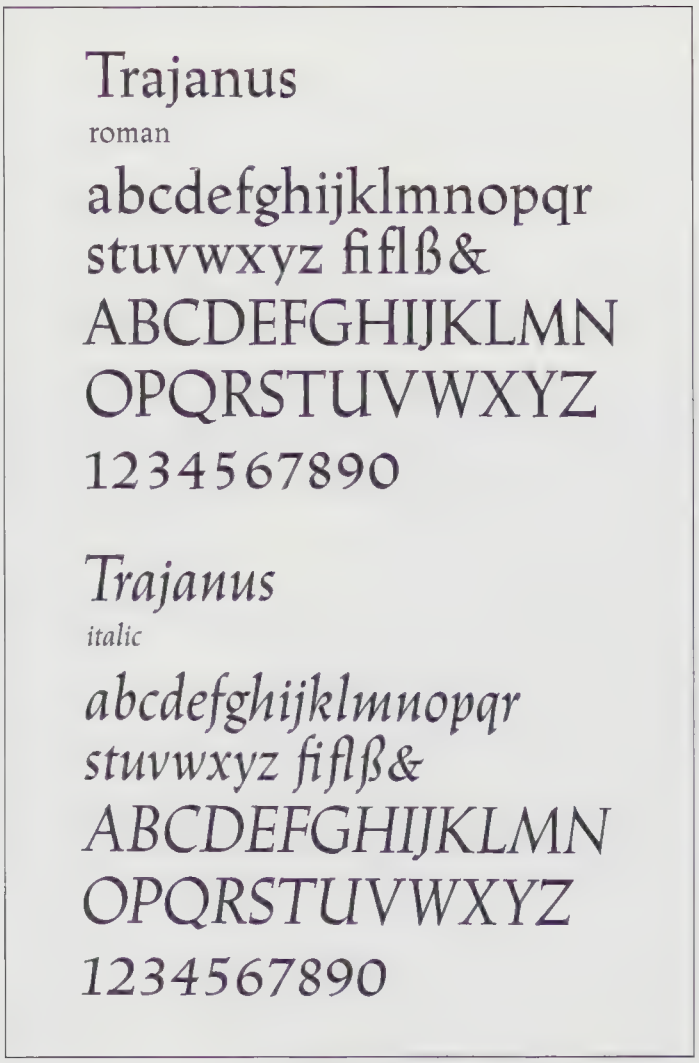
quality of the rest of the design.

Trajanus was originally available only as a small family of roman and bold with a complementary italic for the basic roman weight. Later Linotype created a Bold Italic and exceptionally attractive Black and Black Italics to fill out the family. These bolder weights are quite heavy and exaggerate the already strong design idiosyncrasies of the basic roman design; the italic, true to form, is quite condensed and almost appears to be from another style.

Specifics Several characters distinguish Trajanus—the "g" has an unusually small lower bowl, the "N" is wide (wider, in fact, than the "M"), and the "f" and "t" mimic pen flicks at the ends of their horizontal strokes. Some other Trajanus signposts are the small bowl of the lowercase "a" and the very small counter of the "e." Unfortunately, in addition to being distinctive traits, these last two telltale characteristics also make Trajanus a typeface which should be used cautiously in small sizes.

As far as the capitals are concerned, true to oldstyle form, the "B," "E," "F" and "P" are proportionally condensed when compared to the other caps. The "J" drops below the baseline—but only a little (sort of like sticking its toe in cold water), the "U" is a lowercase design, and the "M" is narrow.

Finally, although not a distinguishing mark for Trajanus (because just about every oldstyle type design seems to have one) the lowercase "e" has a diagonal crossbar.



Type samples courtesy of Linotype-Hell Company

BACKGROUND

The first printing types, those which are now called blackletter or gothic designs, were based on the style of calligraphy the scribes used in northern Europe. (Gutenberg's basic concept was to create printed books which looked like they were written by a scribe.) When the idea of printing began to spread, the first place it showed up outside of Germany was Italy. Here, the first fonts created were of types which were a cross between the black letter of northern Europe and those forms now called Roman. The more humanistic influence of the Roman letter forms was prevalent because the Italian scribes had been using this style of lettering to copy the manuscripts of the ancient Romans and Greeks.

Distant Cousins One of the first modern revivals of these earliest of Roman types was William Morris's Golden Type for the Kelmscott Press. Morris's type was developed late in the 19th century and was based on, among others, the work of Nicolas Jenson, a Frenchman working in Venice, Italy, in the late 15th century. Morris's design was so successful that many other printers began to develop similar designs.

Following Golden came the Doves Press type in 1900, and a number of other private press types. These were followed by commercial designs such as Cloister which Morris Benton produced for American Type Founders in 1913, Goudy Oldstyle drawn for ATF in 1915, and Ludlow's Eusebius which was released in 1924.

Trajanus was designed a little later, in 1939, by Warren Chappell. Although Chappell was an American type designer, it was the Stempel type foundry in Germany that released the face. Although not as prolific, nor sharing the renown of type designers such as Fred Goudy, R.H. Middleton or Ed Benguiat, Warren Chappell was one of America's more accomplished and versatile figures in the field of type and graphic design. Much like William Dwiggins, Chappell made his living and was first known as a book designer. It was basically with his activity in the book arts that his prowess and accomplishments as a typeface designer became well known in the design community.

Chappell graduated from Virginia's University of Richmond in 1926, before taking a post in a New York printing office. His most important type training, however, came several years later when he studied punch-cutting under Rudolf Koch in Offenbach, Germany. Koch, the designer of such typefaces as Kabel, Locarno and Neuland, also had a powerful influence on many young designers who were to become leading figures in typeface development in the post-World War II years.

A Milestone Design In 1938, Chappell won recognition as a world-class type designer with the release of Lydian, a sans serif face inspired by calligraphic letter forms. Created for American Type Founders, Lydian became one of the most popular advertising type families in the years just prior to, and well after, World War II. Lydian was also one of the faces to successfully make the technological jump from hand-set metal to phototype in the late 1960s, and again from photo to digital type in the 1980s. And although no Helvetica® or Times Roman® on the popularity scale, Lydian is still widely used today.

The Middle Child Chappell's next face was Trajanus. It was first produced for the Stempel foundry in Germany, but later became available on Linotype typesetting equipment when that company actually purchased the Stempel foundry. Chappell named Trajanus for the Roman emperor whose accomplishments are immortalized on the Trajan Column. In 1950, Chappell drew a third type, this time for the Klingspor foundry in Germany. This face, unfortunately, was never introduced as a commercial product.

Trajanus is not Chappell's most successful typeface design from a revenue-producing

standpoint, but many typophiles will argue that it is his best when aesthetics are the primary benchmark.

CONSIDERATIONS

Trajanus can be used for just about any typographic application—except those which call for blocks of text copy containing more than a couple of dozen lines. This means that Trajanus isn't going to replace Times Roman or Century Schoolbook as the typeface of choice for book and magazine copy. The problem is that Trajanus is just too distinctive for more lengthy text applications. The design becomes overly apparent and can begin to make a stronger statement than the text copy. To use the famous Beatrice Warde analogy, Trajanus is no "crystal goblet" which allows the beauty of the printed word to shine through. What we have here is more along the lines of a very attractive porcelain cup.

Something Old and New The bad news is that Trajanus lacks the universal applicability of a Helvetica or a Times Roman—or even a Century or Baskerville. The good news is that Trajanus can be used for just about any piece for which you would chose a more common oldstyle design such as Palatino or Goudy Oldstyle. The nice thing about Trajanus is that you can have the pleasure of using a typeface which has all the comfortable, tried and true oldstyle design traits that you are used to working with, and still be different and distinctive in your typographic choice.

Trajanus can be mixed with just about any other typeface. It contrasts well with virtually any sans serif design and even complements a wide variety of serif types. Just two points of caution here: Trajanus can clash with some oldstyle designs. (If you want to combine Trajanus with another oldstyle face, pick one with very different design traits—like ITC Weidemann® or Schneidler Old Style). In addition, Trajanus doesn't get on well with other designs with equally strong design personality. Trajanus and Antique Olive, Palatino or ITC Benguiat, for example, would probably not be good graphic partners.

But Trajanus will provide an excellent contrast to the structured characteristics found in serif designs like Bodoni and Walbaum or sans serifs like Franklin Gothic, Univers® or ITC Quay Sans™. The face would also provide a counterpoint for contemporary typefaces like ITC Stone Sans™, Tekton® or Serifa®.

Ultimate in Versatility By the way, Trajanus italic is a particularly beautiful design in its own right. Try using it by itself sometime. The tradition of italic types is that they were originally created as stand-alone designs, and it is only within the last hundred years or so that they were developed as part of a cohesive typeface family. As a result, many italic typefaces can be mixed with virtually any other roman typeface (of either serif or sans serif variety). Trajanus italic is such a design. Use it to set off body copy set in Helvetica or ITC Avant Garde Gothic®. The results may pleasantly surprise you.

Trajanus was originally released with a delightful little set of ornaments to complement the alpha letters. Unfortunately, these typographic spices never made it into current typesetting technology. If you like these ornaments, it might be worth a note to your font supplier.

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Best Working Environment The range of Trajanus is virtually unlimited beyond the most prosaic of text usage. Its distinctive design creates a definite mood in any use, and because it is not specified or used nearly as much as other oldstyle designs, headlines, subheads, and other display applications will look fresh and distinctive.

Trajanus bold and black are particularly handsome designs. They embody all the classic oldstyle design traits and have a rugged strength which commands attention on the page. If these designs were people, it could be said that they "fill a room."

The basic roman weight of Trajanus should not go without some serious usage considerations either. It is as distinctive as the more commonly used designs like Nicholas Cochin and Cloister, but again, is not used so much that it has become a design cliché.

Although not a problem for display work, one consideration for text applications is that Trajanus is not particularly well suited for use in small sizes. It has unique characteristics—the counters of the "e," and italic "k" and the loop of the "g," for example— run the risk of filling in at anything below 8 or 9 point, especially if low resolution printer output will generate the final product.

Keeping Things Even Few things typographic look as silly as a traditional oldstyle type design with overly tight letter spacing. It's roughly akin to wearing a fashionable suit with the pants legs cut too short. This one miscalculation can ruin the whole image that would have normally been created. Oldstyle typefaces cry out for even and relatively open letter spacing.

On the other hand, word spacing for Trajanus ought to be tight and even. Word spacing should always err on the tight side, but this is especially true when x-heights are of modest proportions. Too much word space will almost always require the reader to read words separately and then combine these words into thoughts and sentences. The ideal is for the reader's eye to glide across the page grasping three or four words at a time. Excessively open word space makes this impossible. The old trick to check on word space color is to turn the copy upside down. If you can easily discern one word from another, there is too much white space between the words.

Trajanus has not as yet made the jump to desktop publishing. To use the design you will have to revert to ordering and specifying type the old-fashioned way. For some this may be an inconvenience; for others it may be a pleasant return to simpler times. ■

A regular contributor to Step-By-Step, *Allan Haley is author of the Step-By-Step Publishing book, "ABCs of Type," and is editorial director of* U&lc, *the International Journal of Typography, published by International Typeface Corp., for which he serves as executive vice president.*

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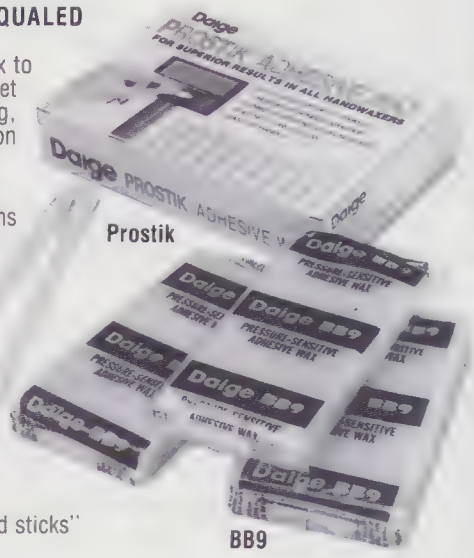

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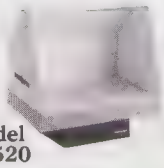

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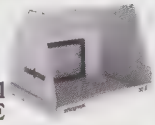

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The Best and Worst Types of Assignments

Some jobs are golden eggs, some are goose eggs. Learn how to best feather your nest.

By Cameron S. Foote

Last issue in this space we looked at the best and worst types of freelance clients. In this issue, we look at the best and worst types of freelance assignments.

As with the previous evaluation of clients, this report summarizes the consensus of hundreds of independent creatives around the country. However, inasmuch as the availability and attractiveness of assignments varies somewhat according to one's job title, these findings are tabulated separately for designers/art directors and illustrators.

The information is presented as a set of general guidelines, a way to help you determine relative odds for success and satisfaction. Within any given assignment category there is, of course, considerable opportunity for good experiences and bad ones.

Each type of assignment is rated by five criteria: 1) Availability, or the number and diversity of assignments; 2) Steadiness, or consistency of getting assignments; 3) Satisfaction, or how enjoyable most assignments are; 4) Pay, or how compensation compares; and 5) an Overall Grade, a summary of all the factors.

The types of assignments are listed more or less in order of increasing desirability—worst first, best last.

DESKTOP PUBLISHING

Here is a paradox of technology: On one hand it allows us to be more productive and efficient. On the other hand, it permits nonprofessionals to enter the business. It is now relatively easy for anyone to get into the business of designing and illustrating brochures, newsletters and instructional materials. Someday it will all shake out, and the best and most creative individuals will prosper. In the meantime, it's a tough business. Large up-front investments are required, financial returns are low, and there are always several new competitors promising to do work cheaper and faster.

	Design	Illustration
Availability:	B+	C-
Steadiness:	B	C
Satisfaction:	D	C
Pay:	D	D
Overall grade:	C	C-

EDITORIAL

Several decades ago, publications were the major source of work for freelances. Although no longer true, the legacy—low pay coupled with arbitrary and non-professional practices—remains for art directors. Illustration, however, is often an exception.

The reason why more art directors (writers, too) don't rebel apparently lies in the "prestige" of having their work circulated widely in print, the often interesting variety of assignments and the ability to sell one-time rights.

	Art Direction	Illustration
Availability:	C	B
Steadiness:	D	D
Satisfaction:	B+	B+
Pay:	D	C
Overall grade:	C	B

Illustration by Jeff Meyer

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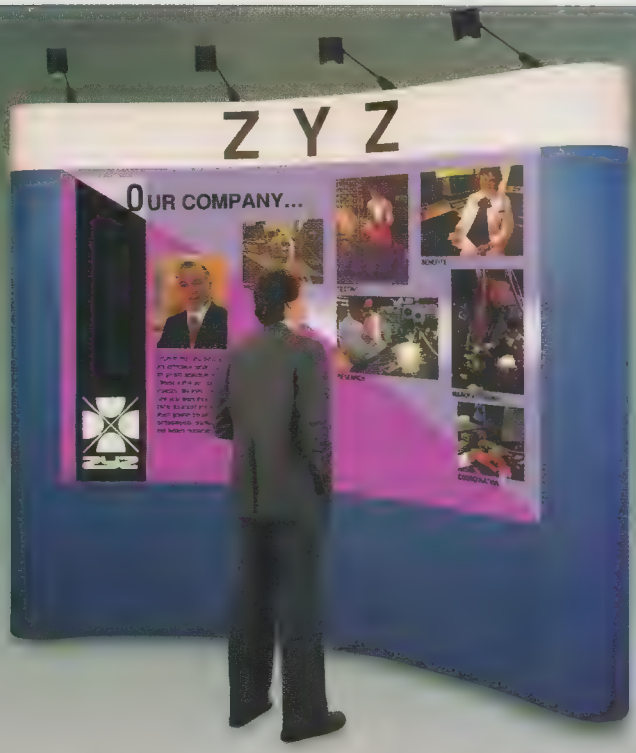

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AUDIO VISUAL

AV involves working in an ephemeral, nonprint medium. "Show" assignments usually come from AV production houses, which can be difficult clients. This is also a high-pressure business with lots of midnight oil and last-minute changes. For these reasons it can be less than rewarding for many graphic designers. But this is show business, which can mean fun assignments.

	Design	Illustration
Availability:	C	C-
Steadiness:	A	C-
Satisfaction:	C	C
Pay:	B	C-
Overall grade:	C+	C-

SIGNAGE, EXHIBITS & LOGOS

Although client "bigness" is not necessarily beneficial in all work, this is one where it clearly is. The bigger the client, the more stimulating and financially rewarding the assignment.

My ratings, which report averages, reflect this. If you work mostly for larger, sophisticated clients, you may think the ratings low. If you work mostly for smaller clients, you will probably think them high.

	Design	Illustration
Availability:	B	C
Steadiness:	C	D
Satisfaction:	B	B
Pay:	B	B
Overall grade:	B	B-

BROADCAST ADS

Freelancing broadcast work requires a dynamite reel, strong agency background and good creative director connections (there is virtually no direct client work). It is also a highly vulnerable field—you are only as good as who you know, and are judged on your last commercial.

If you work in a large metropolitan area and have a proven record, however, this field can pay big. It is also more creatively stimulating for art directors.

	Art Direction	Illustration
Availability:	C	D
Steadiness:	C	D
Satisfaction:	A	B
Pay:	A	A
Overall grade:	B	C

PRINT ADS

Print ads continue to be one of the mainstays for freelance art directors and illus-

trators: Nearly 85 percent of this group produce this type of work. But since there is lots of competition, success depends upon being selective. Here are some suggestions:

- Don't limit yourself to ad work; it makes you too vulnerable to business swings.
- Stay away from small ads for small clients, unless there is other work involved.
- Don't let agencies beat you down on price; often they are just testing you.
- Develop an industry expertise; it makes selling easier and allows you to charge more.

	Art Direction	Illustration
Availability:	B	C-
Steadiness:	B	B
Satisfaction:	B	B
Pay:	B	B
Overall grade:	B	B-

DIRECT MARKETING

Catalogs, mail packages and response ads are high on the list of plentiful assignments for illustrators. For art directors, however, clients and assignments are choice but few. A proven track record is absolutely necessary to get work.

If you have the style or "touch" that can sell products, direct marketing assignments are among the most lucrative. Often there is little limit on financial reward: It is directly proportionate to how well your work sells.

	Art Direction	Illustration
Availability:	D	B
Steadiness:	C	B
Satisfaction:	C	B
Pay:	A-	A
Overall grade:	C+	B+

PACKAGING

There are only two significant negatives about packaging assignments: There aren't many available, and most of the good ones go to large, well-known design shops. In short, it's great work, but tough to get.

	Design	Illustration
Availability:	C	D
Steadiness:	C	D
Satisfaction:	A	B+
Pay:	A	A
Overall grade:	B	C-

Editors' Note: The information presented in this article was not "graded" by Step-By-Step Graphics' *editors. It represents the views of columnist Cam Foote, based on phone and mail surveys conducted by his newsletter,* Creative Business.

ANNUAL REPORTS

For many organizations, an annual report is the most important printed piece produced. So it is not only less budget-constrained than other work, but offers tremendous creative opportunities as well.

For designers, experience is a prerequisite for getting work from large or well-established organizations, but not for illustrators. However, there is ample opportunity for designers to break into the field by seeking out newly formed or small organizations, especially non-profits.

	Design	Illustration
Availability:	B	C
Steadiness:	B	C
Satisfaction:	A	A
Pay:	A	A
Overall grade:	B+	B

COLLATERAL

Unlike some other parts of the communications business, collateral—all the printed literature organizations use to promote their products—is a growth area. There is ample variety and sufficient work for everyone—experienced and inexperienced.

Also on the positive side, there is relatively little agency competition inasmuch as many clients would rather deal directly with a freelance or small studio. And it takes no longer to get a $3,000 collateral assignment than a $750 ad assignment.

	Design	Illustration
Availability:	A	B
Steadiness:	A	A
Satisfaction:	B	B+
Pay:	A	B
Overall grade:	A-	B+ ■

Boston-based freelance Cam Foote is editor of Creative Business, *"The How-to-Succeed Newsletter for the Freelance and Small Studio," and gives the popular nationwide workshop, "How To Make It As A Freelance." This article is condensed from material published in* Creative Business.

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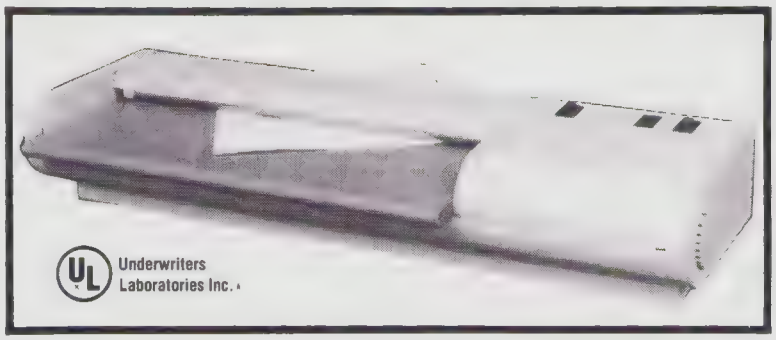

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Mead Schaeffer: The Romance of the Brush

One of the foremost illustrators of the American romantic era evoked mood with strong brushwork.

By Frederic B. Taraba

Illustrator Mead Schaeffer's eye was that of a master painter, but he had a writer's soul. He imbued his pictures with a strong sense of mood and composition through bold brushstrokes, always with an eye toward the drama in his scenes. With his penchant for leaving out just enough detail to spark the viewer's imagination, his work strikes that delicate balance between what is obvious and what is implied. The body of his work for major magazines, including *Ladies' Home Journal*, *The Saturday Evening Post*, *McCall's*, *Redbook* and *Cosmopolitan* among many others, shows a strong yet simple approach that made him one of the foremost illustrators of the romantic era of American fiction. He knew from very early on that he wanted to be an artist and set out to live a life in which the act of painting was not just the means to an end, but was the goal itself. "I smelled the turpentine," he recalled of his visit to an artist's studio at age seven.

As a boy he clipped pages from magazines drawn and painted by the top illustrators of the early part of the century; Howard Pyle and Frederic Remington were his favorites. With these early inspirations, it comes as no surprise that he painted larger-than-life subjects. Schaeffer was a stylistic amalgam, a hybrid of two distinct influences in American illustration. Shortly after his graduation from Pratt Institute in 1920, he attended classes in Leonia, N.J., with Harvey Dunn and Dean Cornwell, for a time posing for Cornwell's paintings. From Cornwell he gathered the sweeping, modeled, almost "mannered" fluidity of the great muralist tradition passed down from Frank Brangwyn. From Dunn he gleaned the bold, thick application of paint, the bravado of Dunn's mature style. (For more on Cornwell, Dunn and Rockwell, consult *Step-By-Step Graphics*, Vol. 3, No. 3; Vol. 5, No. 3; and Vol. 4, No. 3.)

It is perhaps an oversimplification to say that his pictures depend primarily upon mood, yet it is the mood that carries the message rather than the overabundance of detail typical of his contemporaries, including his friend and neighbor Norman Rockwell. In her excellent book, "Norman Rockwell's People," Susan Meyer writes of Schaeffer's work: ". . . specific details of individuality and expression were secondary to the overall sweep or mood of the illustration . . . transcending the recording of the immediate details. . . . [Schaeffer worked] comfortably from imagination, from fantasy, inflating reality." If the mood was right, details could remain implied.

His best work communicates a sense of physical vitality which is as fresh and direct today as when the canvas came off the easel. In his paintings of the '20s and '30s we see myriad staccato patterns, giving the pictures an intensely impressionistic feeling as our eyes flicker over the painted surface. Because of the brushy application of paint, we never see these pictures in quite the same way twice. There is always some new passage to grab and hold our attention. According to a catalog of a retrospective of Schaeffer's work at the Hyde Collection, the illustrator "concentrates all of the artistic expression behind a central mood, a central theme, and carries it through with tremendous force."

CREATING THE IMAGES

Schaeffer immersed himself in the settings he depicted by packing up his sketch pad and wife Elizabeth (also a Pratt graduate) to go see things firsthand. For the series of 16 Illustrated

(Continued on page 136)

Stark composition, bold colors, and minimal details help establish the rich mood of "The Blue Roadster," a story by Corey Ford in *American Magazine*. Stylistically, Schaeffer seems to be paying homage to Edward Hopper. The few falling red leaves and huge expanse of the car make the figures intensely human. These are just the right touches to give the correct mood to the tragic story. The published caption reads: "Joe," she said, "I've got to talk to somebody. Can I talk to you?" (Collection of Society of Illustrators Museum of American Illustration. Donated by the artist.)

Photos of Schaeffer's paintings by Jill Pratzor

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Dramatic lighting and subdued color typify Schaeffer's oil on canvas illustration for such classics as "The Count of Monte Cristo," published by Dodd, Mead in 1928. The heavy architectural elements in this picture help to establish the mood of the dungeon at Chateau D'If. (Courtesy of Illustration House, Inc.)

(Continued from page 132)

Classics for publisher Dodd, Mead, the artist traveled at his own expense to Paris (Hugo's "Les Miserables"), New Bedford, Mass. (Melville's "Moby Dick") and the South Seas (Melville's "Typee"), ensuring that the inspirations he felt in reading these classics of world literature were rendered accurately.

Typical of his attention to "getting it right," Schaeffer sketched in charcoal or colored inks, experimenting with light, shadow and mood while his wife clicked off rolls of film to fill in details which did not find their way into his sketches. Back at the studio he would hone the elements of their mutual effort into a composition that retained the mood he chose to convey. The brochure from the Hyde Collection retrospective refers to Schaeffer's compositions as "organized into elaborate patterns and shapes that both underscore the meaning of the story and are beautiful in their own right."

Once the composition was set, the artist would bring in models to fine-tune the relationship between figures and setting and to control nuances of form that were often beyond his influence on site. Next, he would do a quick, small oil sketch on board to rectify any last anomalies in his interpretation. Examining the oil-on-board studies and their resolution into the canvas, it is clear, to quote the Hyde Collection brochure, that Schaeffer's compositions are "completely modern, completely 20th century, first for [their] strong, flat patterns and second for [their] direct abstract effects."

SKETCH TO CANVAS

When he had worked out the problems of color, Schaeffer redrew major elements of the composition with charcoal on a large stretched, usually unprimed canvas. From there many other artists would simply dive in head-first, working out color relationships as they went along. Schaeffer, on the other hand, often added one more step: Using transparent watercolors, he would paint over the charcoal underdrawing to re-examine the color relationships he had initially worked out in the oil sketch. This added step helped him finalize the painting, yet didn't slow him down. In an interview with Susan Meyer, the artist said, "[I] had acquired a broad, direct manner of working—a technical facility, plus an ability to fake and improvise—which permitted prodigiously rapid accomplishment." Even Rockwell, himself a fast worker, admired Schaeffer's speed of execution.

His quick application of paint allowed for bold brushstrokes which look completely unmiti-

gated. The paint lays on the canvas in such a way that each stroke can be examined. As he painted, if the brushstrokes looked good, he would move on. The goal was not to prove his skills, but to create a mood.

Many of Schaeffer's works for the Classics series and for general-interest magazines depict night scenes, which evoke mood by their very nature. The idea was to give an impression of what the human eye actually perceives at night. These illustrations make us feel as though we're part of the scene, that our vision has adjusted to the night so we can see the subtle variations of light.

While mood was important, Schaeffer didn't neglect details. To this end, he assembled a huge collection of costumes and props, preparing him for virtually any assignment an editor handed him. But rather than using the props and costumes for their own sake, Schaeffer used them to establish authenticity and to better evoke mood. He trusted his artistic sense enough to use the proper accoutrements without having to depict each in its entirety.

While painting with a full color palette was often his preference, throughout his romantic period Schaeffer was often restricted to painting in two colors because of the limits of reproduction in the era's large circulation magazines. This restriction, however, did not limit his broad tonal range or his inventive brushwork.

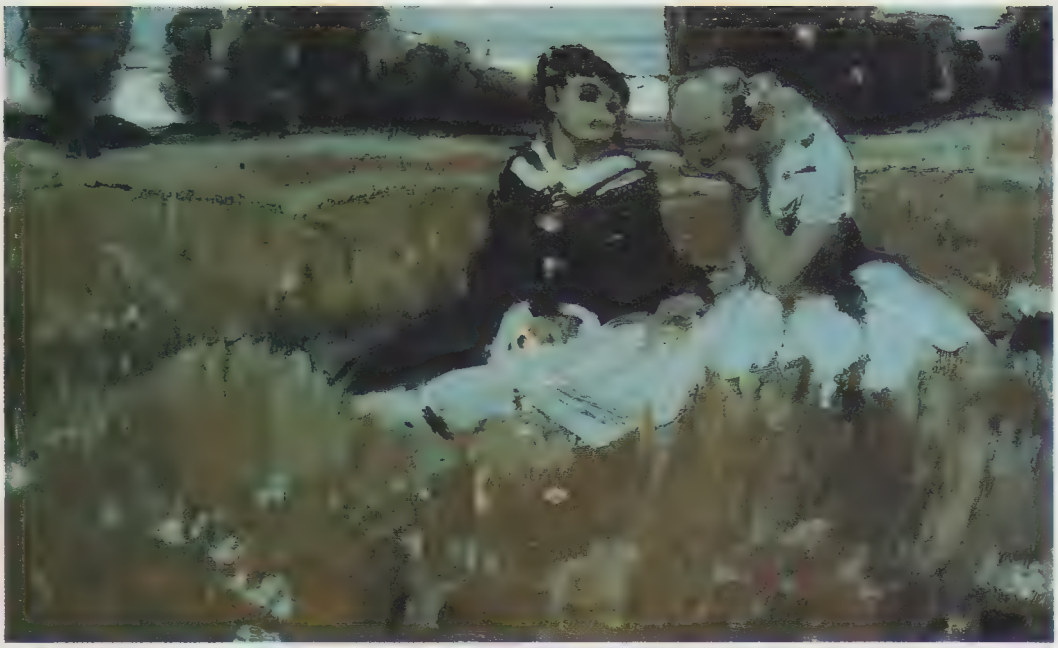
Over his 30 years as an active illustrator, Schaeffer was remarkably prolific. Frequently completing illustrations for two magazine covers a month, as well as book covers and occasional advertising commissions, he produced an impressive total of more than 5,000 published illustrations.

Although he did some advertising work, including advertisements for Packard, the U.S. Brewer's Foundation, Ivory and Electrolux, Schaeffer found his writer's soul to be more suited to the depiction of fiction. In addition to the 16 volumes from the Dodd, Mead literature series, Schaeffer illustrated the stories of F. Scott Fitzgerald, Ernest Hemingway, Zane Grey, Rafael Sabatini, Stephen Benét, Joseph Conrad and Sherwood Anderson, as well as many others. Each writer admired the illustrator's adaptation of his story's mood.

The sketching process helped Schaeffer hone his pictures and make them read clearly. These two sketches for an unidentified story illustration were probably for *The Saturday Evening Post.* Schaeffer typically did several such sketches on site to work out composition and mood. Notice, for example, how the elimination of the prominent background figure in the first sketch, the increasing modeling as well as the play of light and shadow guides our attention more to the central figure in the second sketch. (Courtesy of Illustration House, Inc.)

A NEW ERA

With the advent of the '40s, several factors contributed to a change in the types of illustrations Schaeffer painted. With the war, periodicals such as *American Magazine* became less interested in publishing "costume" stories which had long been Schaeffer's bread and butter. Instead, popular periodicals of the day began focusing on the war and uniquely American themes. Schaeffer too turned from his swashbuckling adventure pictures to a more realistic style, depicting the larger-than-life heroes of a new age. As he recalled in an interview with Meyer, "I suddenly realized I was sick of it all—sick of painting dudes and dandies. I longed to do honest work, based on real places, real people and



Oil sketches helped Schaeffer establish his color strategy before proceeding to large oil on canvas finishes. The artist's bold, painterly approach is evident even in these small (6 x 10-inch) sketches. The published caption reads: "'Oh Litha, is it true?' Addie asked. 'Are you going to marry Brad?' Litha, sobbing, could not answer.'" The placement of the two young women in a field of brown makes them seem isolated, lost in their own thoughts. The dark shapes of the trees and the foreboding sky of the background convey the sense of friendship about to be threatened by factors beyond their control. (Courtesy of Illustration House, Inc.)

The elegant sweep of figures in this Mardi Gras masquerade illustration pulls us into the scene. It is largely through Schaeffer's willingness to visit the sites he painted that we are able to feel so drawn into the celebration. We know this is a night scene, yet Schaeffer manipulates the dark passages as if our eyes have adjusted to the light. His brushstrokes suggest motion and visual excitement. The caption reads: "By this time the Carnival had begun in real earnest." We feel that we are there to enjoy it. (Courtesy of Illustration House, Inc.)

real things." With this in mind, both Schaeffer and Norman Rockwell embarked on their landmark series.

Past the age of enlistment, the two friends went to Washington to see how they could contribute to the war effort. While Rockwell created "Four Freedoms," Schaeffer did covers for *The Saturday Evening Post* depicting the 14 branches of the Armed Services. Since federal regulations prohibited commission of the paintings, the *Post* opted to publish the paintings and to underwrite a nationwide tour to raise money via Victory Bonds.

Schaeffer's military *Post* covers retain some of the same elements from his earlier work, including the close observation of detail and the larger-than-life physical vitality of the subjects. This is a different reality from earlier "costume" scenes. There is grit, blood and sweat in these pictures. In her article, "An Afternoon with Mead Schaeffer" (published in *Confrontation* in 1975), Yvonne Rodax, the artist's second wife, refers to the artist's figures as "charged with mysterious force." The inflated reality of these covers, however,

A decorative look characterizes this illustration, part of a series Schaeffer painted for *Redbook* during the early 1930's entitled "Women America Remembers." This image was the first of the series, featuring Molly Brant. Schaeffer's colorful palette is more subtle here, yet he used the same strong brushstrokes. The figures in this period are often outlined in black, giving them a flatter, more decorative look. This large (26 x 50-inch) painting conveys a historical sweep that fits the series well. (Collection of Society of Illustrators Museum of American Illustration. Donated by Mr. and Mrs. Herman Schoppe.)

The narrative thrust of Shaeffer's work had established itself to such an extent that, by the late 1930s, he no longer even needed a story from which to create a mood. "Bandits holding up a coach" was published by *American Magazine* as a promotional teaser. The caption read in part: "Can You Write a Story for This Picture? Haven't you often thought that you could write a story as good as some of those you've read? Here's your chance to try it." Schaeffer's sense of fantasy, his large store of period costumes and his use of models as types, rather than individual personalities, involved the readers in the creative processes of wedding image to text. (Collection of Society of Illustrators Museum of American Illustration. Donated by the artist.)

remains true to his feeling for the figure. Schaeffer summed up his approach this way in that article: "Never show the battle itself–show the scene before or afterward and let the observer imagine the rest."

As models for these *Post* covers, Schaeffer sought out enlisted men. He was helped in his search by the U.S. War Department, who sent the soldiers to the artist's home in Arlington, Vt. After completing the preliminary steps in his creative process, he would pose soldiers on his lawn or in the studio. Schaeffer looked upon these men as new U.S. heroes.

When peacetime finally came, the artist continued working in a more realistic manner with several more covers for *The Saturday Evening Post*. He depicted scenes of life in America, from the Big Muddy River in North Dakota to the snow-covered mountains in Vermont, from Mount Whitney, Calif., to the lighthouse at Hudson, N.Y.

LIVING THE LIFE

Schaeffer embraced the life of the illustrator and the accolades and camaraderie, or "show biz" as he was fond of calling it, that were a byproduct of his hard work. Bob Crofut, who lived near the artist after Schaeffer retired, remembers him as romantic in his outlook toward life, a dapper, committed man who was truly exhilarated by his life as a top illustrator.

Arlington, Vt., became something of a headquarters for *Sat-*

THE SATURDAY EVENING
POST
SEPTEMBER 12, 1942 10¢
MEAD SCHAEFFER
★MUST BRITAIN GIVE UP INDIA? BY EDGAR SNOW
★ COMPLETE NOVEL BY ROBERT CARSON

New American heroes who emerged during World War II were documented by Schaeffer in a series of covers depicting the 14 branches of the Armed Services. This is typical of the canvases done as a part of the series. The *Post* covers were more finely detailed than the bulk of his work, conveying the gritty reality of war. (Courtesy of Illustration House, Inc.)

Typical of his later period is "Skiing in Vermont." This cover for *The Saturday Evening Post*, published in 1946, was part of a series meant to give the viewer a sense of the overall grandeur and diversity of the U.S. To create a more brilliant white, Schaeffer used a non-oil-based white paint, probably standard house paint, which fluoresced more strongly at the printing stage. (Courtesy of Illustration House, Inc.)

urday Evening Post cover artists living in the area. In addition to the Schaeffer family were Norman Rockwell, John Atherton and George Hughes. It was an ideal situation for the illustrators, as Schaeffer told Meyer: "We were exalted in those days. Do you know what it's like to be venerated just for doing something that you love to do?" In fact, Arlington was enough of an attraction that there were special bus tours to see the studios of these four great artists.

In addition to the sense of community that Arlington afforded, it was a perfect place for Schaeffer to pursue his great love of fishing. This was the way that he relaxed; hours spent in the nearby Batten Kill River were an ideal way to solve the artistic problems that arose in the studio. He could catch supper and return to his studio relaxed, with a fresh eye and a new perspective.

Schaeffer was very much his own man. Throughout his career he was offered various positions related to the field of illustration, but none properly suited his creative spirit. He taught briefly at the Phoenix School in 1938, but gave that up to concentrate on working at the easel. Similarly, when he was offered the art editorship of *McCall's*, he declined. And, when he felt his own inspiration running out, he felt no need to continue. By the mid-1950s he'd grown tired of illustrating, so, abruptly, he stopped.

Yet as years passed, instead of being forgotten, others began to recognize his tremendous talent. While being honored at a Society of Illustrators' luncheon in November 1980, he passed away. Schaeffer's contribution to illustration art continues to be recognized and admired by those who appreciate bold composition and a painterly style.

RESOURCES

If you would like to learn more about Mead Schaeffer, please consult the following resources:

- "An Afternoon with Mead Schaeffer," Yvonne Rodax. *Confrontation*, Fall/Winter, 1975.
- "Norman Rockwell's People," Susan E. Meyer. Harry N. Abrams, New York, 1981.
- "Illustrating for *The Saturday Evening Post*," Ashley Halsey, Jr. The Writer Inc., Boston.
- "Saul Tepper and Mead Schaeffer," exhibition catalog, published by the Society of Illustrators Museum of American Illustration, 1986. ■

A frequent contributor to "Methods of the Masters," Frederic B. Taraba is Assistant Director of Illustration House, a New York City gallery and auction house specializing in American illustration of the past century.

SHORTCUTS

These timesaving tricks and tips will help you to get the job out the door.

SCREEN TINTS VS. FOUR-COLOR

When you design a job that contains both four-color photography and screen tints, you sometimes set yourself up for disappointment on press: To preserve the quality of the photos, the tints may suffer. If you must maintain critical color in the tints, the photos will most likely not reproduce well. Try building the tints with two colors and not three. In this way, you won't have to sacrifice the color of the photo or the tint.

STEREOSCOPIC 3-D

If you want to use 3-D graphics in a printed piece but don't like the goofy glasses or severely misregistered photos, consider a new/old 3-D approach. Based on turn-of-the-century stereoscopes, the new method employs a simple viewing box, which, when assembled, allows the user to view twin four-color images. The lens in the box, the specially printed photos and the box's construction tricks the eye into seeing many layers of dimension in the photo. Various formats, from postcard to magazine inserts, are available. Contact: The Added Dimension, P.O. Box 15325, Clearwater, FL 34629; (813) 446-9106.

WATERCOLOR ON CANVAS

To achieve the feel of watercolor on canvas instead of paper, try painting with acrylics on canvas prepared with several thin coats of watery gesso. The trick is to prepare the canvas so it is absorbant (like watercolor paper), yet still has enough gesso to create a white or off-white working surface so the color does not bleed uncontrollably into the cloth.

A good mix to begin with is two parts gesso and one part water. Once the canvas is thoroughly dry, apply acrylics diluted to a thin wash in one corner of the canvas. If the color bleeds too much, add another coat of watered-down gesso. Experiment until you have a surface that accepts color like a good watercolor paper. Heavier grades of canvas may require more coats of the watery gesso.

The only drawback to this technique is that, unlike sized watercolor paper, edges can become fuzzy (similar to unsized Japanese watercolor paper). These edges can be easily firmed up, however, with the addition of opaque color. Simply add opaque white to the color you are using until you have a match. Make sure not to cover up all the washes, or you will lose the watercolor feeling.

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TEXTURE/COLOR UNDER PHOTOS

When you want to use a colored, uncoated paper—say a heavy, textured burgundy—but you have to include a photo that needs a crisp white background, try using a white, untextured, uncoated stock instead. Then scan the textured stock as a background and use a match color to simulate the color of the paper.

COLOR HARMONY PRIMER

- When creating a layout which will contain many colors, try to use the complement of one of the colors as a background. This will result in strong color harmony.
- Alternatively, try an achromatic background (such as white, gray or black).
- If you must position two discordant colors next to each other, try using white, gray or black rules to break the colors apart visually. ■

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Reference Shelf

Book reviews of the latest and standard titles imparting how-to and career aid information.

Design Essentials

A team of Adobe electronic designers has pooled its discoveries into a do-it-yourself workshop in advanced effects for Illustrator and Photoshop. "Design Essentials" is no substitute for a User's Guide, but it doesn't try to be. The authors—Luanne Seymour Cohen, Russell Brown, Lisa Jeans and Tanya Wendling—expect their audience to be familiar with the basic workings of the software and eager to learn more. "Design Essentials" moves briskly through the lessons, presenting more than 30 techniques, many of them with an inviting set of variations (40 "recipes" for low-memory patterns built with Illustrator dashed lines, for example, and seven Photoshop filter combinations, each combination shown on four photos to let you gauge the effect on a human face, an animal, a still life and a landscape).

Instructions are straightforward and generously laced with illustrations. Whenever the authors can choose between showing or telling they do opt for visual explanations. As a result, they've made it easy to prop the book beside the computer and follow along from picture to picture. Each lesson stands on its own, so you can explore "Design Essentials" piecemeal, when you have time to spare or when a project merits special treatment. Along the way, the authors include professional production advice: a primer in color trapping and overprinting, tips for evaluating film, a simple chart to help you generate smooth blends.

If you're relatively new to Illustrator and Photoshop, you'll enjoy every lesson. If you're experienced in the programs, you've surely made some of these discoveries on your own, but you'll still learn a lot from "Design Essentials." The only readers who won't benefit from the lessons are people working with old versions of the software. The effects were all developed for Illustrator 3.0 and Photoshop 2.0 or higher.

Adobe Press/Prentice Hall
Computer Publishing
11711 N. College Ave.
Carmel, IN 46032
102 pages; $39.95

Nationalism and Globalism

In his newest release, "Nationalism and Globalism in Design," Hugh Aldersey-Williams has undertaken an arduous swim against the tide of globalism, back toward what the author sees as more stable cultural ground in nationalism. "By stating—sometimes perhaps overstating—the case for national design and pointing out examples, I hope to offer encouragement to designers who are concerned with the threat posed by globalism to national design identities and who wish to combat that threat in their work," he writes in his preface.

This is scholarly reading, but it is not dull. The author, the European editor for *International Design* and a writer for many graphic arts publications, has an authoritative grasp of the Big Picture, combining his knowledge of design, manufacturing, cultural influences and current affairs.

The book begins with a formidable introduction which presents Aldersey-William's arguments. And he does not beat around the bush. "Globalist corporations are jumping the gun by pretending that regional differences do not exist in their multinational markets. In doing so, they are implicitly attempting to unify or homogenize mankind. . . . So-called global products are undoubtedly less than ideal for many users, but because of the power of these corporations, and the related enfeeblement of local manufacturers, the choice for the user is often that between the global product and no product at all," the author writes, naming Sony, Bennetton, Swatch and Frog design as manufacturers and designers guilty as proponents of global design.

The next section of the book provides more examples of globalism and nationalism in other areas of the arts, including architecture and music. Here and throughout, photographic references are plentiful.

In the largest section of the book, Aldersey-Williams visits countries around the world, including Germany, The Netherlands, Denmark, Great Britain, France, Spain, Italy, Switzerland, Hungary, Yugoslavia, Russia, Egypt, India, Singapore, Hong Kong, South Korea, Japan, the United States and Canada, to examine their respective brands of nationalistic design. He provides a micro-study of each country's design history and relates the current state of the art, again including many photographs as proof.

Finally, the author attacks what he perceives to be five rampant globalists, IBM, Philips, Sony, Frogdesign and GK. As in his bold introduction, the author pulls no punches here.

Aldersey-Williams has done the design industry a service by assembling this book, whether or not one agrees with his case. Designers, because of the hectic pace of their trade, may not have had the time or may simply not have noticed this split in the industry. It is a subject worthy of careful consideration.

Rizzoli International Publications
300 Park Avenue South
New York, NY 10010
204 pages; $45

The Graphic Design Portfolio

While not necessarily written for established graphics pros, "The Graphic Design Portfolio: How To Make a Good One" is an enlightening peek into what some recent graphic design school graduates are (or should be) packing into their portfolios.

Written by Pentagram partner and School of Visual Arts instructor Paula Scher, the book contains seven different assignments Scher presented to her Senior Portfolio class, and it is illustrated with student work. "Each assignment is presented as it was originally given, accompanied by some of the thought and working processes involved in completing it," Scher writes.

The assignments, to redesign a newspaper's section cover pages, a retail design project, a book jacket, a political poster, a record jacket, a magazine and a promo-

HOW TO UTILIZE PRINTING PAPER RESOURCES

Contact your local paper merchant or write to the paper manufacturer for copies of the following inspirational, informational and technical resources.

ChlorFree Gloss (For examples of four-color printing on a chlorine-free sheet.) The demand for oxygen-bleached—as opposed to chlorine-bleached—paper is high in European countries, but the environmental trend has yet to take hold in the States. This gorgeous promo may turn a few heads. (Mohawk Paper Mills, Inc., 465 Saratoga St., Cohoes, NY 12047.)

The Colonnade Collection (For samples of four-color printing on various weights of coated web offset paper.) It's three promos in one—Weyerhaeuser uses its No. 4 groundwood stock to produce a mock catalog, magazine and direct mail piece. (Weyerhaeuser Paper Company, P.O. Box 829, Valley Forge, PA 19482.)

Subjective Reasoning (For examples of hand-drawn type, and large blocks of type printed on a premium coated stock.) Drenttel Doyle Partners' William Drenttel and Pentagram's Paul Scher have joined forces to produce the first in a series of essays (to be published every four weeks) from Champion International. A speech by Czechoslovakian President Vaclav Havel, titled "The End of the Modern Era," has been reproduced in hand-lettering by Drenttel—an amazing task given the amount of serifed type the creative director had to create. "I wouldn't ask you to read anything I wasn't willing to draw," he writes. (Champion International Corp., One Champion Plaza, Stamford, CT 06921.)

Ward Commercial Sample Portfolio (For printed samples of various promotional materials printed on an acid-free sheet.) This "anti-promotion" (as it is billed by its creators) contains several invitations, a program guide, a poster and samples of letterhead, all actual projects created by Peter Good Graphic Design. (Ward Paper, P.O. Box 587, Merrill, WI 54452.)

Home (For a sample of match color printing on a warm-colored, flecked stock.) A holiday promotion piece produced by Stewart Monderer Design, Inc., provides some innovative combinations of color on a flecked sheet. (James River Premium Printing Papers, 145 James Way, Southampton, PA 18966.)

Neenah Bond Letterhead Folder (For samples of one-and two-color letterhead systems printed on cockle and bond finishes.) These are attention-grabbing designs, and even better, most were probably not pricey print projects. (Neenah Paper, Neenah, WI 54956.)

Genesis (For samples of soy ink printing, fluorescent inks, duotones, embossing, foil stamping and engraving on an 80 lb. recycled cover stock.) Designed by Little & Company, this promotion is as useful as it is graphically interesting: Fourteen blank notecards plus matching envelopes are included. (Cross Pointe Paper Corp., St. Paul, MN 55108.)

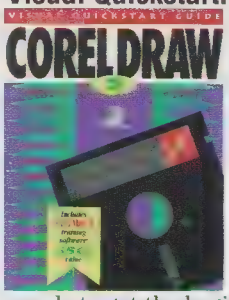
Totem Pole (For a sample of match-color printing and elaborate diecutting and finishing processes on recycled stock.) In what has to be the tallest promotion we've received, Beckett Paper provides a do-it-yourself totem pole to symbolize harmony with the environment. (Beckett Paper, 400 Dayton St., Hamilton, OH 45011.)

tional campaign, are challenging. For example, the newspaper assignment asks that the student redesign the cover pages of the five special weekday sections of the *New York Times*. The copy which accompanies the students' finished work could be the in-class lecture Scher delivered with the assignment.

For the non-student, Scher also provides useful insights into the physical assembly of a portfolio, how to keep a portfolio up-to-date, and what happens to one's work once it is dropped off. Scher's writing skills are evident in the book's introduction, titled "Learning to Design," and in its epilogue, "Beyond the Classroom," both full of sound, hard-earned advice.

Watson-Guptill Publications
1515 Broadway
New York, NY 10036
160 pages; $29.95

Visual Quickstart: Corel Draw 2



One of the niftiest aspects of this little book will become immediately evident to any graphic artist: It is completely visually oriented, using pictures and diagrams rather than page after page of words to get the beginning and intermediate Corel user up and running quickly.

This is actually a two-part release, as it includes the book and a tutorial "walkabout" disk for one price. The book is standard instructional fare, albeit with the visual twist. Seven chapters introduce the program, explain the Tools, File Edit, Transform Effects, Arrange, Display and Special Menus, and show how to use CorelTrace and MOSAIC. A handy appendix gives quick directions to specific dialog boxes.

More interesting is the accompanying software, billed as "a full-featured training course that covers all aspects of Corel Draw." Basic Concepts, The Toolbox, Working With Text, Coloring Your Work, and Advanced Special Effects are covered in 3½ hours of on-screen, interactive lessons.

Peachpit Press
2414 Sixth St.
Berkeley, CA 94710
141 pages; $24.95

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Desktop Publisher's Survival Kit

Designer, instructor and programmer David Blatner says he wrote the "Desktop Publisher's Survival Kit to help "technical gurus and design gurus" communicate with each other. "The gurus always seem to talk on a level that normal people can't understand," he notes. If you already see yourself as a "guru," this book may not be for you. But if you are still struggling up the learning curve, read on.

Blatner divides his book into the prerequisite chapters: graphic file formats, fonts, word processing, typography, style and codes, scans and halftones, color, printing, when things go wrong, and software. The chapters are basic and a quick read, but the author doesn't patronize. He offers carefully selected nuggets of information that simultaneously educate the reader and provide a glimpse of the bigger picture.

Take, for example, the book's explanation TrueType and Type 1 fonts, hints and what a laser printer needs to work. "It's like the difference between bringing your own toppings to a pizza parlor or letting the pizza chefs use their own. TrueType fonts carry their own special toppings (hints) around with them, and almost any PostScript printer can use them to make a great-tasting pizza. Type 1 fonts rely on the printer to have the toppings they want. . . . .But the pizza tastes just as good either way."

Perhaps the most useful chapter (or at least the one most graphic artists will turn to first) is "When Things Go Wrong." Software and hardware problems are covered cursorily but adequately here, including corrupted files, printing problems, font conflicts and equipment breakdown.

As a bonus, the book contains a Survival Kit Disk, full of utilities, fonts and art handpicked to make the desktop publisher's life a little sweeter. A file compression program, a text conversion application, a color blending utility, and a "smart quote" generator are only a few of the goodies. All of the programs are either freeware or shareware, and run on any Mac with an 800K disk drive, a hard disk and System 5.2 or higher.

Peachpit Press
2414 Sixth St.
Berkeley, CA 94710
172 pages; $22.95 ■

CALENDAR

Upcoming seminars, trade shows, exhibitions, deadlines and events in visual communications.

SEPTEMBER

Digital Imaging Courses Various dates in September and October, Apple Computer Market Center, Manhattan, N.Y. Animation, Advertising and Desktop Video courses will be offered. Contact: Center for Creative Imaging, 51 Mechanic St., Camden, ME 04843; (800) 428-7400.

Points of Change Exhibit Through September 13, Delaware Art Museum, Wilmington, Del. Cartoons, comic strips and posters from pre-World War I through World War II will be on display. Contact: Delaware Art Museum, 2301 Kentmere Parkway, Wilmington, DE 19806; (302) 571-9590.

Spectrum '92 September 13-16, Phoenician Hotel, Scottsdale, Ariz. The international color conference will focus on recycling, marketing in a recession, transnational advertising trends and quality in advertising. Contact: Graphic Communications Association, 100 Daingerfield Rd., Alexandria, VA 22314-2804; (703) 519-8160.

Walt Kelley Exhibit September 16 through January 3, 1993, Cartoon Art Museum, San Francisco. Eighty original paintings and drawings in such categories as, Illustration and Advertising, Animation, Sunday Strips, Political Satire and Memorabilia will be on display. Contact: Cartoon Art Museum, 665 Third St., 5th Fl., San Francisco, CA 94107; (415) 546-3922.

Designing Under the Influence September 17, AIGA, Bank IV Auditorium, Wichita, Kansas. World-famous illustrator Brad Holland will speak on what influences and inspires him in his work. Contact: Gardner + Greteman, 617 E. William, Wichita, KS 67202; (316) 263-1004.

UCLA Extension Courses Various dates beginning September 19, University of California, Los Angeles. Courses include Contemporary Graphic Design, Designing Logos, Trademarks and Symbols, and desktop animation. Contact: UCLA Extension, 10995 LeConte Ave., Suite 414, Los Angeles, CA 90024; (310) 825-1901.

Spots Competition Call for Entries. Deadline September 21. The sixth annual competition will accept spot illustrations from magazines, newspapers and annual reports. Contact: Society of Publications Designers, The Lincoln Building, 60 East 42nd St., Suite 1416, New York, NY 10165; (212) 983-8585.

Seybold Conference September 22-25, Moscone Center, San Francisco. The latest issues, trends and applications in desktop publishing will be discussed and exhibited. Contact: Seybold, Box 578, Malibu, CA 90265-0578; (310) 457-8500.

Calligraphy Competition Call for Entries. Deadline September 25. Contact: Calligraphy Review, 1624 24th Ave., SW, Norman, OK 73072; (405) 364-8794.

OCTOBER

New Tools Conference October 4-6, Grand Hyatt, New York City. Concentration on integrating new technology with design and the effects on the entire industry. Seminars include TV Graphics, Digital Advertising, 3-D Design, Color Production and The Future of Design Software. Contact: Computer Graphics for Design, P.O. Box 8380, Santa Fe, NM 87504; (800) 982-0051.

Design Management Conference October 7-11, Design Management Institute, Cape Cod, Mass. Topics such as understanding and managing new technology effectively will be covered at the 17th annual conference. Contact: DMI, 107 South St., Suite 502, Boston, MA 02111; (617) 338-6380.

Business of Design October 23-25, American Center for Design, Chicago, Ill. This conference will feature prominant business and design leaders who will speak on how design can be used as a strategic resource. Contact: American Center for Design, 233 E. Ontario St., Suite 500, Chicago, IL 60611; (312) 787-2018.

Modern Design: 1890-1990 Through October 25, Metropolitan Museum of Art, New York City. Exhibit includes furniture, architectural and design drawings, and other media following different design approaches and developments during the 20th century. Contact: Metropolitan Museum of Art, 82nd St. and 5th Ave., New York, NY 10028; (212) 879-5500. ■

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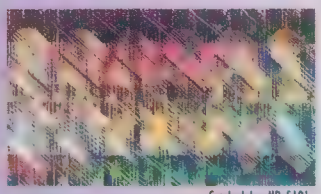

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Outputting Fine Color From The Desktop

In the tradition of fine arts printers, a handful of color houses are producing limited edition Iris prints from digital files.

By Joe Matazzoni

Most people familiar with Iris printers know them as digital proofing devices. Although Iris Graphics, a Scitex subsidiary, introduced its 3000 line of high-quality printers five years ago, the product's use for anything other than predicting what a scan or a page will look like on press has been quite limited. The main reason, as Mexican photographer and "printmaker" Pedro Meyer somewhat idiosyncratically puts it, was "the absence of knowing how to do it."

One of a growing number of artists, designers and publishers now turning to Iris printers for anything from producing one-off point-of-sale displays to limited edition, museum-quality prints, Meyer's color and black-and-white pictures are in the permanent collections of some 40 museums around the world. (He is currently preparing a show of 90 Iris prints for the California Museum of Photography, in Riverside.) If it weren't for the pioneering efforts of the handful of Iris shops around the country, these artists simply wouldn't be able to push the technology to its limit.

During the last couple of years, shops like Nash Editions (Manhattan Beach, Calif.), Harvest Productions (Anaheim, Calif.) and Image Transform Ltd. Ankeny, Iowa) have been experimenting with inks, substrates and protective coatings for better color and longer-lasting prints; customizing their hardware; writing their own software; and generally working out the kinks of a process that now enables them to produce output that simply has to be seen to be believed. Regarding themselves very much in the tradition of fine-arts printers as opposed to standard color service bureaus, these shops have evolved what has hitherto been the missing link in computer graphics—high quality, relatively inexpensive prints. In the process, they've created a host of new creative and entrepreneurial opportunities for graphics professionals of all stripes.

DIGITAL AIRBRUSH

As their name suggests, Iris inkjet printers are a bit like digital airbrushes. The actual imaging is performed by four precision-milled nozzles, each of which pumps out about one million droplets of cyan, magenta, yellow and black ink per second. The droplets themselves are about the size of a human red blood cell. On the models used by the shops mentioned above—the large-format 3024s and the 3047s—the nozzles are suspended above a drum that holds the medium on which

Gallery Prints Fine artist and printmaker Karen Strohbeen began by scanning in a colored pencil sketch. Working in Q/FX and RIO on her PC, she drew with the Wacom tablet to complete the final image for printing onto Rives archival paper at Image Transform Ltd., in Des Moines, Iowa. This print has sold in galleries throughout the Midwest.

they will print and spins at almost 21 feet per second.

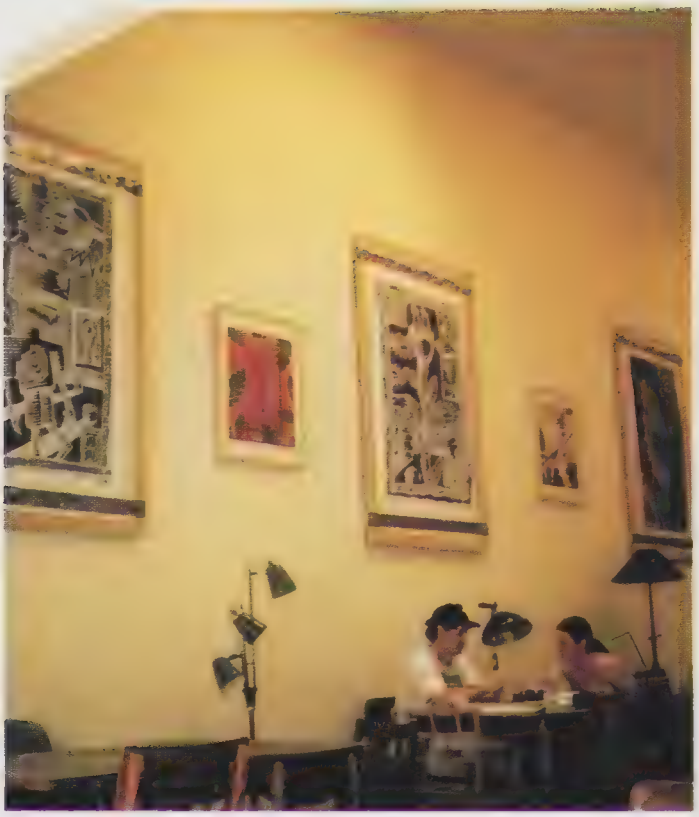
Two main factors set Iris inkjet printers apart from other digital printers and make them suitable for a wider range of uses. The first is the wonderful physicality of the prints. Instead of printing with wax or laser toner, Iris printers use a water-based ink that looks and feels like watercolor paint when it dries. Even more significantly, instead of printing only on plastic-coated films or specified types of paper, Iris printers can print on just about any medium you can strap onto a drum—canvas, handmade paper, vellum, mylar, whatever. Together, these factors make for prints that feel like real art objects.

Of course, the best paper in the world won't make a poor print look good; consequently, the characteristic that makes Iris prints unique is the fine detail and subtle color they can deliver. Artists I've spoken to who use the process—from fine-arts lithographers and photographers to graphic designers accustomed to high-quality offset or gravure printing—uniformly praise Iris inkjets as producing results that are superior to their accustomed methods of reproduction. One of the most noticeable characteristics of the prints I've seen is that printing dots are only visible in the very lightest parts of the images, typically where only one or two process colors are manifested. In the mid-range and darker areas, dots are completely invisible, even under a loupe.

This is partly because the Iris printers don't use rosettes. Instead of laying process-color dots down next to each other and relying on the eye to blend them, Iris printers lay dots of translucent ink right on top of one another.

The second reason the dots are so hard to see is that they are small. Iris printers don't use the same halftoning schemes

Experimental Papers Fine arts photographer Pedro Meyer exhibits his images worldwide in museums and galleries. Using either a Mac IIfx or a Quadra 950, he prints his black-and-white and color Photoshop images on a variety of archival papers in sizes ranging from 22 x 30-inches to 41 x 29-inches. Technical experts at Nash Editions, Manhattan Beach, Calif., where Meyer printed this piece on an Iris inkjet printer, are working with Meyer as they experiment with new glossy and semi-gloss photographic papers.



Iris Installed This exhibit at the Congo Square restaurant in Santa Monica, Calif., features Iris prints created in Photoshop by Tom Mattson. One of these images is shown in the figure, "Digital Collage."

used by imagesetters and most other digital printers (it's actually a form of error diffusion, though not the random dither with which many computer users are familiar). This makes it hard to talk about the resolution of Iris prints; they just aren't directly comparable to other types of halftoned material. With that qualification, however, it's fair to say that the Iris printers produce the equivalent of 300-line halftones. At that linescreen, they are capable of representing 512 shades per printing color—more shades than are possible in a 24-bit file.

FOR WHOM THE INK JETS

Inkjet printing offers different advantages to different people. Surprisingly, one of the biggest constituent groups of Iris services today aren't computer artists at all. They are traditional artists who have turned to digital printing for a variety of reasons.

Harvest Productions owner Maryann Doe notes that her service is particularly popular with watercolorists, who send in either transparencies or actual paintings for scanning on high-end scanners. "They have no other way to reproduce their work that gives them a true, original watercolor print," Doe says. For limited editions, Harvest will issue a certificate of authenticity stating that, to its knowledge, only the specified number of prints were made and the working files were then destroyed. Some artists use inkjet prints as a base for mixed-media explorations. Internationally known watercolorist Francesco Clemente recently produced 18 large pieces in this way, using prints Nash Editions output for him on handmade Indian paper.

One of the great things about digital output for traditional artists, whether painters, photographers or printmakers, is that it enables them for the first time to enjoy many of the advantages computer artists and desktop publishers have now come to take for granted. Artists Bill Luchsinger and Karen Strohbeen of Macksburg, Iowa, switched about a year ago from fine-arts lithography to Iris output of computer paintings. "Our options as artists are greatly expanded," Luchsinger explains. "In the first place, it's nice to be able to work in color instead of with grease pencils all in black. Plus, it's a very free medium. If you screw up on a stone, you did just that, you screwed up; it's forever. And we're not working constantly in a toxic environment." Pedro Meyer values the creative control offered by image-editing software: "With the computer you can control what you cannot in the darkroom, no matter how competent a craftsman you might be."

For computer artists, the main boon inkjets provide is the simple ability to produce prints they can sell as originals. Designer and artist Tom Mattson who works out of Venice, Calif., says, "You can't drag a monitor around with you. How do you create something that has lasting value in the fine art market? The Iris has substance, you can hold it, you can put it on good paper."

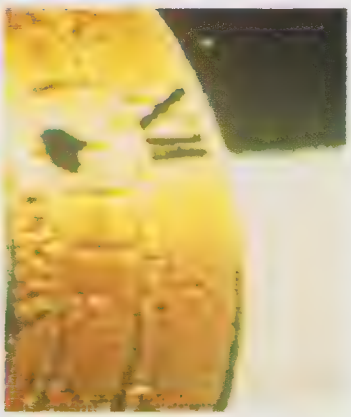
How well do gallery owners take to inkjet prints? Luchsinger admits that "they're pretty resistant." But, he adds, "the prints sell. That goes a long way toward making [gallery owners] feel good. The picture is the issue. If it's good when it's done, how it got made is secondary."

COSTS AND SIZES

One of the most obvious and attractive applications for inkjet printers is limited-run publishing. Convention or point-of-sale displays, event posters, maps, architectural renderings and more can all be printed at sizes up to 34 x 46.3-inches. All the shops I spoke to can handle files from vector-graphics programs such as Illustrator or Aldus FreeHand as well as paint images or scans.

Costs of inkjet prints vary considerably from shop to shop and, of course, according to image size. When getting a quote, be sure to find out what the price includes. One shop may quote $700 for one 34 x 46-inch print of guaranteed quality. You might get a quote of $200 for the same size print from another shop, only to discover that paper is extra (about $50 a sheet for archival quality), and coating is extra, and that you, not they, pay for any bad prints. Naturally, all shops charge extra for services like laminating, scanning and image-editing.

Whether or not those prices sound high depends on what you are comparing them to. One key advantage of the digital process, however, is that it makes printing possible on demand. For example, just because you're running a limited edition of 50 prints doesn't mean you have to produce all 50 at once—so you don't have to tie funds up in inventory. "I have one client who prints a calendar," says Maryann Doe. "On the back he offers fine-art prints of the different months. When he gets orders, he just calls me up and says 'I need two Februarys, one March and one June.'" Prices at Harvest Productions are 27 cents per square inch of image size on Rives archival paper and 32 cents per inch printed on canvas.



How It Works Iris large-format inkjet printers can accommodate paper sizes up to 34 x 46.3-inches, and are compatible with Macs, DOS- and UNIX-based platforms, and color electronic prepress systems like Hell, Crosfield and Scitex (far left top). The resolution of an Iris print is approximately 1,200 to 1,800 dpi. Most graphic designers use the Iris for prepress proofing of digital files, for comping and presentations. But now, through the pioneering efforts of a few color shops, artists can create high quality limited-edition prints for exhibit and display.

Outsized Output Like the experts at ITL and Nash Editions, Maryann Doe and John Bilotta of Harvest Productions, Anaheim, Calif., work closely with the fine and graphic artists who use their Iris-based printmaking service (right top). They can print on a variety of substrates including hot and cold press rag paper, frosted and clear acetate, canvas, and gloss paper. Their house paper is Rives archival paper. They can accept digital files from a variety of sources, including nine-track, ½-inch magnetic tape, Targa files, Mac files, Wavefront and Alias files.

Micro-dots As this series of photos illustrates (at left), Iris printers produce the look of continuous-tone color by creating images out of tiny variable-size dots, each consisting of one to 31 microscopic droplets of ink. Because the dots vary in size, and because the smallest are virtually indistinguishable to the unaided eye, the result is an image that closely approximates continuous tone printing. The area of the clock in the microphotograph was first enlarged 10 times (above) and then 50 times (below) to show the dot placement.

IS IT COLORFAST?

Inkjet printing is a new technology, and no one knows for certain just how long the prints will last. Claims by Iris itself are quite modest. Ink and media manager Don Allred is willing to commit to only "one to two years, with incidental, interior lighting." That's with no protective coating and standard inks, however. By "standard" Allred means both the regular graphic arts inksets, with accents on subtle tones and flesh tones designed for SWOP proofing as well as industrial design inksets, which are characterized by more vibrant colors and are used for presentations, product design and non-prepress applications.

The shops I spoke with all offer to laminate prints or protect them with ultraviolet coatings. Jack Duganne, master printer at Nash Editions, helped to develop the coating both Nash and Harvest use. "With the coating, we'll guarantee up to 26 years," Duganne says. "We base that figure on testing in a UV-acceleration chamber, with exposure to intensive UVB light, the most destructive of the spectrum." There's no absolute way to translate chamber test results to a figure for years in the real world. So to arrive at a longevity estimate, Nash tested its inkjet output along with Cibachrome prints. "Cibachrome is guaranteed for 26 to 50 years, as a result of extensive testing by the industry," Duggane explains. "Since the coated inkjets did not fade until after the Cibachromes did, we'll guarantee at least the life of a Cibachrome." The coating makes the

(Continued on page 152)

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An alphabetized list of designers and illustrators featured in this issue.

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503-230-2821

Lou Byer
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Indianapolis, IN 46202
317-264-0843

Mary Carter
The Black Point Group
340 Townsend St., Suite 420
San Francisco, CA 94107
415-243-9311

John Casado
1858 Fanning St.
Los Angeles, CA 90026
213-666-5123

Margo Chase
2255 Bancroft Ave.
Los Angeles, CA 90039
213-668-1055

Alan Cober
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Buffalo, NY 14260
914-941-8696

Gensler and Assoc./Architects
550 Kearny
San Francisco, CA 94108
415-433-3700

Harvest Productions
6312 E. Santa Ana
Cnayon Rd., Ste. 350
Anaheim, CA 92807
714-281-0844

Image Transform Ltd.
2309 W. First
Ankeny, IA 50021
515-964-0436

Iris Graphics
6 Crosby Dr.
Boston, MA 01730
617-276-5383

Mark Jasin
601 Cloverdale Ave., No. 403
Los Angeles, CA 90036
213-965-9757

David Johnson
299 South Ave.
New Canaan, CT 06840
203-966-3269

Bill Luchsinger/Karen Strohbeen
Box 6
Macksburg, IA 50155
515-768-2469

Tom Mattson
Industrial Strength Design
516 Boccaccio Ave., Suite C
Venice, CA 90291
213-578-6486

Jeff Meyer
3232 N. Humboldt
Milwaukee, WI 53212
414-372-3747

Pedro Meyer
1333 S. Beverly Glenn, Apt. 1004
Los Angeles, CA 90024
310-475-3631

Charley Murphy
4146 Pilsbury Ave. S.
Minneapolis, MN 55409
612-827-8166

Nash Editions
P.O. Box 637
Manhattan Beach, CA 90266
310-545-4352

Rabbit Ears Productions
5 Sylvan Rd. South
Westport, CT 06880
203-857-3760

Stinehour Press
Route 2
Lunenburg, VT 05956
800-331-7753

Dahl Taylor
915 Broadwy
Albany, NY 12207
518-427-8047

Emily Polishook-Thompson
34-50 28th St., No. 5B
Astoria, NY 11106
718-937-2388

Bonnie Timmons
5 Springdell Rd.
Coatesville, PA 19320
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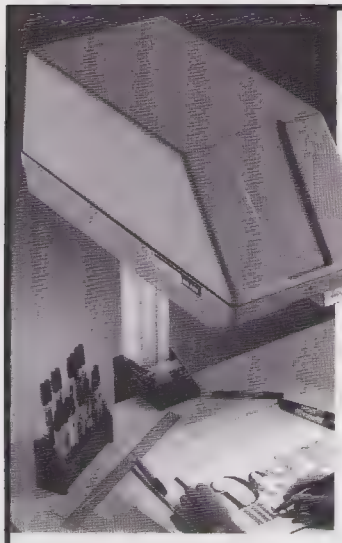

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RIO, Lumena and Q/FX on the PC "After experimenting with many different hard copy devices including photography, I concluded that the Iris inkjet printer on textured paper was the key to making a fine art print look right," says Minneapolis-based artist Charley Murphy. "This piece was made on my 386 Zeos PC computer equipped with a Targa 32 graphics board, Howtek scanner and RIO, Lumena and QFX software. I began by gathering reference and scanning them; then I cut them out to a specific color (as RIO will allow the dropping away of one color). I collaged them in the vector format of RIO and printed them to a 12 mb, 32 bit image. I then altered colors using the Image Control feature of QFX/HiRes and deckled the edge using the brushes contained in the QFX program. I then transferred the image to a DOS Syquest for shipment to the Iris color shop."

Digital Collage Graphic designer Tom Mattson, principal of Industrial Strength Design, chose an environmental theme for a series of fine art images he created for a show in Santa Monica, Calif. Until he found out about Harvest Productions and archival Iris prints, this graphic designer (who also paints) was frustrated because he couldn't produce exhibitable originals of his computer-generated fine art at a reasonable price. To create the image below, he shot 35mm slides of the objects, scanned them on his Microtek flatbed 300Z color scanner (600 dpi) and then composed and layered the collage in Photoshop. While working on this series, he would occasionally drop in an EPS created in FreeHand.

(Continued from page 149)
prints water-resistant.

In addition to applying a coating, Nash Editions increases the life of its prints by using custom inks, some of which are made for the shop. Iris's Allred says the printer company is working on a new, light-fast ink set, which could be released in 1993 if all goes well. Iris is also developing test data that will enable it to make firm claims about print longevity.

PRINT PIONEERING

Inkjet printing has come a long way in the last few years—especially Iris technology—but make no mistake: Anyone getting involved today is venturing into unexplored territory. Depending on how particular you are, making the process work for you could require a considerable amount of homework and testing. Arriving at a routine that yields consistent, predictable color requires intensive effort.

As with imagesetting, one of the most important decisions you'll make when getting started is your choice of an output shop. In general, according to Mac Holbert, Nash Editions' operations manager, shops that produce prepress proofs won't tend to be the same ones producing finished art pieces. "[Shops] have to make a choice one way or the other," Holbert states, "because once you go into the art papers, you contaminate the machines grossly with lint. In the last six months, we've had calls from three or four service bureaus asking if we would take on their art business, because it was too much trouble for them."

Ron Cherkas, president of Image Transform, agrees. He points to a number of factors that differentiate average Iris shops from art-oriented ones. Shops doing high-quality work need a network with enough capacity to handle very, very large files—up to a gigabyte for full-size and full resolution. A shop should be able to handle whatever file formats you throw at them. And you'll save time if the shop offers the finishes and mounting services you need.

But most of all, it's a question of attitude. "This is the clos-

est thing in the digital world to printmaking," Cherkas says. "If they're going to pull it off, they have to be willing to work with you." He speaks of doing such things as going into digital files to cut down their intensity so he could "triple strike," running thirsty art papers through the printer multiple times in order to build up ink density. Cherkas is typical of those interviewed who are involved in producing inkjet art. They're excited to be developing a technology with the ability to both reproduce traditional media more affordably and make possible completely new artforms. "We see this as changing the fine art printing and photographic market completely," Cherkas says. "I don't know where it's going to go, but it's all very interesting." ■

Joe Matazzoni, a contributing editor to MacWorld *magazine, is a freelance writer in Oakland, Calif.*

Prints to Order According to PC-based graphic designer Mary Carter, clients frequently request a larger version of her art and design to hang in their offices after a print project is finished. When she created her illustrations traditionally, selling the originals was a convenient way to generate additional income. But when she made the switch to digital art, she needed to find a way to create limited-edition prints of her files. Now she prints her Corel Draw files, like this one, via the Iris to canvas and mylar as well as to archival papers like Rives. "[With these prints] there is no discernible dot pattern. The ink spreads when it hits the surface of the paper which gives it a lovely effect—almost like a serigraph or lithograph—making it very attractive for corporate art."

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LOOKING AHEAD

A sampling of upcoming articles:

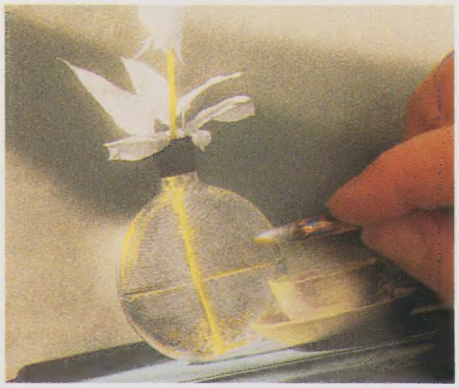
NEW ORLEANS, AFRICAN STYLE

Inspired by the sculpture and masks of Yoruba tribal artists, Mark Andresen uses pencil, dyes and watercolor to create a lively promotional illustration for the city of New Orleans.

AN ALL-TYPE MAKEOVER

Typographic designer Larry Miller gives a first-person account of a redesign round-robin: Miller's original award-winning all-type spread influenced the legendary Herb Lubalin to create a spin-off design. Lubalin's spin-off prompted Miller to update the piece today for *Step-By-Step* readers.

OIL PAINTS ON INFRARED PHOTOS



Fine art photographer Jill Enfield applies her signature technique—hand-painted black-and-white photographs shot with infrared film—to a print ad.

OLYMPIAN GRAPHICS

Paris-based Desgrippes Cato Cobé & Associates designs a $1.5 million graphics program for the 1992 Winter Olympics.

PREHISTORIC ILLUSTRATION

Combining the study of the fossil record with observation and scientific speculation, Tarbosaurus Studios illustrates the anatomy of a Styracosaurus.

CARTOONING TECHNIQUE

Elwood Smith invites readers into his studio to share in his sketching and concepting process as he breaks new stylistic ground.

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- Herring Press, the publishing arm of Jerry Herring's perenially successful design firm, compiles, designs and publishes a new guide book for Houston.
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ADVERTISER'S INDEX

Aldus 25
Altsys 125, 127, 129
American Paper Institute 135
Apple Computers 9
Artograph 127, 151
Astor Universal 127
Biovation Products, Inc. 31
CalComp 20
CatPak 150
Crane Paper Mills 13
Cross Pointe Paper Corp. 11-12
Daige Products, Inc. 126
The Diffraction Company 145
Diseno Grafico 153
Dynamic Graphics Educ. Foundation ..38
Eastman Kodak Company 14-15
The Font Company 130
FontHaus 35
FPG International Corp. 151
Frisk Products USA 16
Graphic Artists Book Club 39
GRAFIX 22
Hammermill Papers 23-24
Letraset 21, 37
Neenah Paper C2, 3
Paasche Airbrush Company 125
PLI Photo Lab Inc. 129
Portage Newspaper Supply, Inc. 19
Portfolio Center 150
RasterOps 10
Roconex 36, 144
Schaefer Machine Company 131
Simpson Paper Co. 17-18
Slidex 37, 144
Step-By-Step/GRAFIX 8
Step-By-Step Electronic Design 150
Step-By-Step Graphics 134
Strathmore Paper Co. 29-30
SuperMac Technology C3
SuperStock, Inc. C4
Thayer & Chandler Airbrush Co. 136

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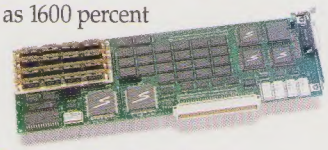

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